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THE

CULTIVATOR,

A MONTHLY

JOURNAL FOR THE FARM AND THE GARDEN,

DEVOTED TO

AGRICULTURAL AND RURAL IMPROVEMENT,

AND

DESIGNED TO IMPROVE THE SOIL AND THE MIND.

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TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

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The Cultivator & Country Gentleman.

CONCERNING "A GOOD CROP."

We all know that the Farmer is frequently styled, in a pleasing figure, the "bone and sinew" of the Country. We are often assured that a prosperous Husbandry lies at the fountain head of prosperity of every other kind. That Agriculture is the great parent of Commerce; the real source of general contentment and welfare; the actual mainstay of a government.

But do we pause and think of the meaning that is involved in these rhetorical outbursts? Do we not rather wear a knowing smile, as they issue from the lips of the very urbane and affable gentlemen who seek our rustic support at the polls? Are we not sometimes inclined to say, as we read them in our Agricultural papers or listen to them in our Agricultural addresses—"All very well for a pretty period, but I wish you had to follow the plow or swing the scythe for your living, and 'try it on!'" Are we not, in a word, either so suspicious on the one hand of what SAM SLICK or somebody else has styled "soft sawder," or, on the other, so little accustomed to go beyond the limit of our own every-day life, and take a larger view of the affairs and events around us,—that the often repeated testimony to the vital importance of Successful Farming to a Community, to a People, to the World, attracts little or no attention from us—is passed by as a matter of course—and the next time we happen to want a little greater Governmental encouragement for an interest of such surpassing magnitude, are we not quite contented to meet with our usual reception and results—to be promised, and postponed, and snubbed, and forgotten?

Would that we had the space, the ability, and the data,—in the midst of the pregnant illustrations now to be found on every side, of the truth of all that was ever claimed for Agriculture by its most fluent eulogists—to point out in fitting terms the manifold channels through which its successes and failures affect all trade, manufactures, comforts and luxuries, the stability of Institutions, the condition of Society, the progress of Civilization, the hopes and happiness of Man. Taking the low rates which the farmer has realized for the products of the last harvest, we should like to trace the bushel of Indian corn for which he has received 10 cents in Central Illinois, and find it returning 10 cents more to the inhabitants of that State for carriage to Chicago, and 2 cents there for storage; busying the navigator of our inland seas, and paying him over again all that it has thus far cost, to bring it on to Buffalo; leaving its passing tribute there for another handling, discharging its slender toll on our canals, and amply remunerating our citizens for its transportation over them; again, in our great seaport metropolis, contributing a cent or two to agents, and as much more to insurers, and, finally, freighting our vessels for Liverpool, where it sells at last, at a price nine times as large as that at which it was originally purchased. We should like to point out how it has put dividends into the pockets of railroad managers, and enabled bond-holders, here and abroad, to calculate with certainty that *their* income will be safe. How it has lightened taxation in New-York, and busied hundreds of working men all along its way to the Ocean, where the ship-owner and the capitalist welcome it as the signal of sure and healthful activity. How it brings back a golden stream, in turn to be disbursed and distributed, or, through the skill of the financier, to accumulate as the source of a well directed system of credit, and diffuse a beneficial sense of confidence and security through every artery of business intercourse. We should like the thoughtful reader on the Prairies, who has accepted the pitiful sum, as it justly seemed to him, for which this bushel of corn was sold,—to go back in mind to the days before the railroads, and consider in what a situation the river blockade would have left him, without their aid in seeking a market. We should like him, if a Patriot—we should like any lover of his Country, at the East or West, to ponder the reverse of all this picture that has just been sketched—a Nation entangled in civil war, *without* food for its armies—a commerce suddenly brought to a standstill with *nothing* to sell that others want to buy,—the miseries of Famine, waiting close upon the horrors of the battle-field, the losses of the tradesman and the forced idleness of the mechanic.

And we should like to have it borne in mind, that, while, with abundant food and no market, there may be fewer luxuries,—there is yet little peril of starvation. That, with scarcity of food—no matter how vast the other resources of a country—its poorer classes must suffer first, and, in their suffering, involve at length all others, from highest to lowest,—as finances are deranged, paupers multiplied, business grows stagnant, and discontent con stantly spreads. That, with productive harvests and ready sales, farms are paid for, churches, colleges and public improvements supported, luxuries both for body and mind diffused,—even the inevitable hardships of war cheerfully sustained, and doubtless turned eventually to good account. That short crops and higher bread, have been prolific of riot and revolution,—sometimes dethroning tyrants, sometimes stifling liberties, often converting the hunger for food into the thirst for blood, reducing humanity to the level of the prowling beast of prey, and nearly quenching the faith of man in man, or in his Maker.

Who, then, can compute, in any calculation of dollars and cents, of guineas and shillings, of francs and centimes, the results, present and remote, that hang upon the prevalence of fine weather or frosts, of rains or drouths, of carelessness or skill, of short-sighted improvidence or far-seeing discretion in the management of the Soil,—in a particular time at a particular place? That we have the sure promise, that "seed-time and harvest shall never fail," is indeed true; but is it not accompanied with the warning that he shall not reap, who does *no more* than watch the seasons in their progress—that he shall not eat, whose industry and energy are found unequal to those emergencies into which at any time he may be plunged? Let us bear in mind the fundamental position which Agriculture occupies—not as a thing to be lightly spoken of with the smile of self-satisfaction, or in the flowery rhymes of the school-boy,—but as involving us in a trust the responsibility of which is incalculably great,—as rendering us, not the almoners of God's *charity* to the world, but the agents of His beneficent provision—a provision which, like the talents of the parable, is susceptible of ten-fold improvement, if we embrace every means of accomplishing it which He places within our reach!

— The time seems to us an appropriate one for a single word of caution. The London Mark Lane Express has repeatedly urged during the course of the past season, that our power of producing a surplus of grain for foreign markets, is now—as some other English journals have ranked our government—quite at an end; and, as recently as the number for Sept. 30th, a correspondent of that journal dating from New-York, decided, entirely we presume to his own satisfaction, that "*this* is likely to be the last year that England may expect any shipments of breadstuffs to a large amount," from the United States! Whether such predictions are to be falsified, rests entirely with the Farmers of the Country; if, discouraged by prices which ill reward their labor, they neglect the *extra effort* that ought to be put forth—in view of the large number who have left farming for fighting,—to ensure the timely performance of spring operations, in the best manner and on a scale as large as possible, we *may* find the country suddenly carried next year from an extreme of plenty to a condition of comparative scarcity, and our importations of foreign goods resumed, without our having produce of any kind with which to pay for them. We confess that we anticipate no such result. But it is wise to avoid all risk, and to err, if error there be, on the side of plenty.

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☞ We are much pleased with samples of the "Woodruff Patent Portable Barometer," advertised in another column by Charles Wilder of Peterboro, N. H., and sent us by the Advertiser. The contrivance for securing ready portability, as described in his advertisement, is equally simple and effective; the workmanship of his Instruments appears to be all that can be desired, and the prices are certainly not extravagant. Samples of the styles retailing respectively at $12 and $8, may be seen at this office.

THE AGRICULTURE OF NICARAGUA.

LETTER TO THE COUNTRY GENTLEMAN FROM HON. A. B. DICKINSON, UNITED STATES MINISTER.

Editors Country Gentleman—How little man knows of a country from its written history! A bare mention of its location, mountains, rivers, lakes, minerals, chief towns, form of government, the number and complexion of its inhabitants, and the most prominent incidents in its annals—and the subject is considered as exhausted, while the true character of its people, animals and vegetables, and the peculiar qualities of its soil are entirely overlooked.

The history of a country which describes it in such a manner that an observing man, if dropped into it blindfolded, without a knowledge of his route, could not, on emerging to the light, detect his location from its written history, is worse than useless, because it only serves to confuse and mislead where it is intended to be a teacher and a guide. That history which gives but the meagre outlines of a country, though true as far as it goes, is nevertheless as much a libel upon its subject as the careful painting of a human skeleton with all its truthful hideousness, would be upon the living, breathing beauty of the human form. When nature is fully and truthfully portrayed, and all the gaps filled up, we behold at once a symmetry and harmony, and fitness of everything which goes to make up one grand and majestic whole, which we utterly fail to see when half of her parts are left out.

As no two things are exactly alike, and as soil and climate have so much to do with the fashioning of man, animals and plants, one would suppose that the picture of a country could as easily be taken with pen and pencil as the likeness of Washington or Jackson, which a common school boy with a little practice can draw on a board with a coal, with sufficient accuracy for any observing Union man to recognize.

I do not propose to give at this time such a history as I recommend, but briefly to call the attention of the readers of the Country Gentleman to the

DIMINUTIVE SIZE OF THE CATTLE OF NICARAGUA,

And, I might add, of Central and South America, so far as my observation has extended. The cattle in these localities are about one-half the size of those of the eastern, middle and western States of North America. I have never seen a bullock slaughtered here that would weigh 500 pounds in the beef, nor have I ever heard of one that weighed 800 pounds. The average nett weight of cattle here does not exceed 300 pounds, while in the Northern States it is as high as 600, and I have seen whole droves of cattle in the New-York market that would average 800 pounds each in the beef. Indeed it is no uncommon thing for several to be slaughtered during the holidays weighing in the neighborhood of 1,500 pounds each. The nett weight of "Washington," the heaviest bullock which I recollect of being killed for beef in the States, was, if I remember rightly, over 2,100 pounds.

I have been thus particular with regard to weight for the reason that Mr. Squier, with some other historians, represents the cattle of this country to be quite equal to those of the United States. It is possible, however, that they mean the cattle of the Southern States, which, like those of all hot climates, are inferior in size to those of more northern latitudes.

I know full well how deceptive the cattle of this country are, with their long, large horns carried high in the air, and yet there is no excuse for writers who make such gross mistakes, even on subjects with which they are not familiar. There are millions of hides exported from these countries, thousands of which annually reach the New-York market, whose average dry weight falls below 22 pounds each. The average weight of green hides in New-York being about 80 pounds, and the hides of two cattle weighing but 300 pounds each being always heavier than the hide of one whose weight is equal to both of them, and assuming the weight of green hides to be twice the weight of dry ones of the same dimensions, which is not far from being correct—and it is not difficult, even from the hides alone, to draw a pretty strong comparison in favor of the cattle of the United States.

The difference in size and weight is not greater than in shape. With limbs as well formed as those of Flora Temple, and their hind feet well set under them, they are ready every time to walk, trot or run, and can kick about as sharp as a deer, to which they bear as close a resemblance in form and carriage as they do to our cattle at home. While the heavier bodied cattle of New-York possess twice the strength and drafting power of these, the latter possess equal advantages over the former in speed and endurance on the road. It is no uncommon thing for them to travel with their accustomed load 30 or 40 miles per day, and I have heard of their being driven 50 miles per day with the thermometer at 85 deg., which I have no reason to doubt. The ox here does all the team work, both on the farm and road, yet I have never seen his tongue out in the hottest of the weather. The horns of a three year old bull are frequently as slim and delicate as a heifer's, but they thicken with age, and do not show a wrinkle for each year, nor diminish in size near the head in extreme age, as they do in our country.

ABOUT BULL FIGHTING—THE COWS AND HOW TO MILK THEM.

Bull fighting, which at home is one of the things we read of, and in countries adjacent to this is occasionally talked of, *means* something here, and only becomes interesting when they have succeeded in killing one or two of the sportsmen, or crippled them for life. When an expert sets out with a lasso fastened to a well trained horse, and captures one of these clean-heeled, slim-horned gentlemen, then when the animal makes his defiant bow, and turns his wicked horns upon his captor, good-bye to horse and rider, unless he has a sure companion at hand to lasso and hold the animal from the other side; and then if man or horse is killed, as frequently happens, it only increases the sport, and they never stop to wink, but another dashes in to fill his place.

The cows of this country generally give about as much milk as a goat, say from two to three quarts per day. Before they milk the cow they always tie the calf to her fore leg. Then they carefully crawl up behind the calf, and the cow is cheated out of what little milk she has, under the supposition that she is giving it to her calf. To attempt to milk the cow without having the calf tied to her fore leg would be considered by the natives as simply preposterous. Besides being "kicked into the middle of next week," they would fail to get a single drop of her milk, which she wouldn't think of giving down to anybody but her calf.

On the cattle estates the milk is manufactured into cheese, resembling what is known in the United States as pot-cheese, with the exception that this is pressed. It is largely used by the inhabitants, and brings from 10 to 12 cents per pound in the market. One hundred cows in this country will make no more, however, than twenty-five in the northern States, as the former do not give more than one-fourth the quantity of milk which the latter do, and even that not half so rich. Butter is, as it were, unknown here, though it can be made of an inferior quality with great pains. Good butter can be brought here, however, from the Northern States, if well made and properly packed for a hot climate, which in time will be done to a great extent, to the mutual advantage of both countries.

The size of man is also less here than in temperate climates. His average weight in this country would fall below 130 pounds, whereas in Maine, New-Hampshire and Vermont it would be 160 pounds, and in New-York and the Western States 150 pounds.

THE VEGETABLE KINGDOM—TREES—LUXURIANCE OF THE SOIL—TREATMENT OF MANURES.

With the vegetable kingdom the difference is still greater, and in favor of this country. It is difficult to draw a comparison, however, as I have never seen but two plants growing wild here, which are of natural growth in the northern States, unless the "cedar" here is the black walnut there, which is quite probable, though it is much larger and heavier here than there, and different in many other respects. All timber here contains more than double the ash that the same amount does in that country. Indeed everything in this country is highly charged with alkali. The soil is made from the out-pourings of volcanoes, and has for ages been enriched with the ashes of burning mountains, which has made this country so unlike all others that it has withstood the worst cultivation ever devised by man to exhaust a soil. The inhabitants all live in cities or villages, and bring everything from the farm to the place of residence to be consumed, without the least particle ever being returned to renovate the soil; and not satisfied with this system, that would in time exhaust any other soil, they sow their corn for fodder, and pull that and the grass up by the roots, with much of the light soil sticking to them, so that when brought in the rain for the animals, which are kept in the towns, the water that runs from the cart loads looks as black as tar water. And this course has been pursued for the last 300 years, with two and sometimes three crops of corn per year, or an alternate crop of corn and tobacco. They are now nozzling up their cornfields with crooked sticks drawn by oxen, to plant tobacco, and that which has been set 15 or 20 days looks better, darker colored, and more thrifty than any other I ever saw in my life, not excepting that which I have seen growing on the bed of a coal pit. All the manure that accumulates here is hauled off and thrown into the rivers, holes or ravines. They never think of spreading it on to their farms or gardens. No one seems to know whether it would do good or harm, as I have never seen the first man that has tried it on either farm or garden. And yet with all this destruction of soil, if one of the farmers has the *calentura*, or from any other cause does not plant his land every year, it will in the course of one season be covered over with a heavy growth of vegetation, ten, fifteen or twenty feet high, as thick as the hair on a dog. I have seen one tree that I was credibly informed was sixteen months old, which was 25 feet high, and 3½ inches in diameter, and I have seen the leaf of a plantain put out and grow in one week to the enormous size of 3½ feet in width, and ten feet in length. There is nothing in the whole vegetable kingdom to which I can compare the plantain tree as it stands in the full beauty of its wide spreading leaves, looking so green and fresh and luxuriant, as though it must have sprung into life but yesterday.

A WONDERFUL TREE, WHICH "GROWS BOTH WAYS."

But the most remarkable tree of all others, and one I never heard of until I saw it, (and yet there are thousands of them on the Polvon and the other rivers that run into the bay of Punta Icaco,) is one which *commences in the middle and grows both ways.* That is to say, the body of the tree commences—according to size—ten, twenty, thirty or forty feet from the ground, with a hundred or a thousand branches running thence to the ground, and spreading in the shape of an inverted funnel, and if the tree is five feet in diameter, none of the branches being more than two inches through, yet so close together that a bird could not fly through between them. The branches shooting upward are very numerous but larger, and the tree looks as though it did not make the least difference which end it stood on. Cut the lower branches all off and turn it bottom end upwards, and stick the top in the mud, and it grows, they say, just as well. And as though not content with growing either end up, it would seem as though nature had given it a monopoly of the surrounding soil by furnishing it with a seed about two feet long, shaped like a round steel-pointed arrow, with a slight bulb near the pointed end, which makes it so much the heaviest that it invariably strikes point downward as it falls from the tree, and sticks straight up in the ground, however hard it may be, or if it falls in the water, it is sufficiently dense to reach the bottom, where it commences growing at once.

If this letter was not already quite too long, I would give you my reasons at length why plants have so much the advantage over animals in this country. In short the soil and climate are so favorable to vegetable growth, that the plants get the start to such a degree that they absorb the ammonia, and draw so largely upon the vitality of the atmosphere that they starve the whole animal creation out of one of the essential elements of growth, not even excepting the dogs, tigers and lions, which are the most miserable, poverty-stricken creatures that ever were thought of in a country where cattle, mules and horses are so abundant in the forests, and easily killed by beasts of prey.

I have not forgotten my promise to write and send you some portions of my last year's agricultural address, which I should have done ere this had I not left my memoranda, which, however, I have written for and expect soon to receive.

With my best respects to our agricultural co-laborers, I remain your friend and obedient servant,

Leon, Nicaragua, Oct. 14, 1861. A. B. DICKINSON.

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[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co., N. Y.--No. IV.

Swine---Different Breeds.

In passing through many portions of Monroe Co. one is impressed with a great many features in the agriculture of the county, which may be looked upon as worthy of more universal adoption, and which may properly be considered as the true basis of progressive agriculture, while he meets with a still greater number of circumstances, systems of management and farm practices, which may be set down as tending to deterioration, or *retrogressive* agriculture.

It will not be my design in this place to say much, except in regard to the practices of good farmers.

One very prominent characteristic in the agriculture of Monroe county is the rearing and fattening of swine for market. I think I never have been in any locality in the Empire State where so many *good* swine are reared as there are raised in many portions of this county. It is no uncommon thing to see on a single farm from twenty to fifty swine, and sometimes as many as seventy, of a very choice breed.

There is quite a variety of different breeds, and are all considered good, although when compared with each other there is a marked superiority of some over others. In some instances we meet with the full-blooded Berkshires, and the Suffolks, the Chester Whites, and the Red Russians; and then there are crosses, at pleasure, between any two breeds which are desirable. Of course nearly every breed appears to possess some superior points of excellence over those of some other breed. One man who has the full-blooded Berkshires is sure that they have no equal; while another, who has received a pair of pigs by express from some one of the eastern States, at a great price, is sure that the Chester Whites are the ne plus ultra of the genus Sus; while another thinks there is nothing equal to the red Russians.

In comparing the merits of the various breeds it has appeared to my mind that it is proper to be influenced more or less by circumstances, and after hearing the "hog stories" of a great many men in favor of their own particular breed, I will simply write what I think about the matter, whether it pleases Mr. A. or displeases Mr. B.

THE BERKSHIRES.—For form and symmetry, good points, for docility, for quiet and peaceable disposition, and for aptitude to fatten well, and to return the greatest number of pounds of pork and lard from a given number of bushels of grain, I think there is no other breed of swine in the world that we can set down as superior to the Berkshires, providing one is satisfied with hogs of a small size. This is the only objection that can possibly have any influence when the merits and demerits of the various breeds are compared with each other. When a man has a lot of Berkshire pigs he can stand up before the world and defy them to produce anything that will compete with them for beauty or nice pork. There can be no valid objection urged against them, only that they are a little too small for making pork for market.

Every man who has had much experience in fattening swine knows very well that large and heavy hogs will always command from 50 cents to $1 more per 100 pounds in pork markets than those hogs which will weigh only from 200 to 300 pounds when dressed. Many farmers adhere to the Berkshires in preference to all other breeds, because they have such small bones, and make most superior meat, not only hams, shoulders and bacon, but mess and prime pork. Still all must acknowledge an inferiority of size. Nevertheless many contend that what is lost in size is most abundantly made up in *quality* of meat; and for home consumption I am quite inclined to concur in this opinion.

THE RED RUSSIANS.—Many farmers in this county, contend that the Red Russians cannot be beat, when the object is to fatten swine for market; because they are of a larger size, and if they are a little coarser than the Berkshires, or Chester Whites, and do not assimilate as much fat, nor as readily as some other breed, which many good farmers contend they do not, they will return as much net profit in the end as any other breed, because they are larger, and therefore, will command a greater price per hundred pounds.

These are some of the arguments, pro and con.

Mr. Isaac Bower, North Chili, who has had much experience in raising swine of various breeds, thinks that a cross between the Red Russian and Berkshire produces a very superior kind of swine, not only for market but for home consumption. He showed me some fine shoats of this cross, which approximate the nearest to a perfect breed of swine of anything that I have ever met with. They possess, in addition to all the good points of the Berkshires, greater length, quite as much or greater breadth, and larger frames, and are as docile and quiet, and apt to fatten as any other breed.

Mr. Bela Dunbar had recently received by express, a pair of Chester Whites, which were very nice indeed; but when they were compared with Mr. Bower's shoats of about the same age,—the product of the Red Russian and Berkshire—I was compelled to think Mr. B.'s pigs the best.

We called at the residence of Mr. Wm. Gridley, who owns a small farm, and has some very good cattle of grade Durhams, and a good herd of Berkshire swine.

On making inquiry for his good improvements in agriculture, we met with none worthy of recording, excepting his rat and mouse-proof corn house, beneath which was a hog-sty. The floor of the corn house is about four feet from the surface of the ground, and the outside was provided with a system of movable slats, which could be drawn along in stormy weather, over the spaces between the main slats, which are nailed to the timbers of the building.

This arrangement subserves a two-fold purpose. One is, to exclude the rain and snow in stormy weather, which is liable to find its way between the timbers, or into the joints, thus hastening their decay; and another object is—and a very important one too—to open large spaces in fair weather, for the admission of a good supply of air, to cure and dry corn in the ear.

Raising Field Peas

Is another prominent feature in the agriculture of this county. In almost every locality where I passed through, and on almost every farm, there would be a field of peas, and on some farms there would be a very large field of them. It was no uncommon occurrence to see fields containing some fifteen, some twenty, and even in some instances, forty acres of peas.

The kind of peas which are most commonly raised, are what they call the Canada field pea. The fruit is rather small, although the yield per acre is good; and so far as I was able to learn by inquiring of those who were pointed out to me as most successful and thorough farmers, the pea crop is about as profitable a crop as any other that they are accustomed to raise.

Those who are accustomed to raise much peas, usually aim to have a good lot of shoats in a thrifty condition, as soon as the peas are matured enough to feed, when they commence feeding them in vines, three times, daily, as many as they will eat without wasting any. Sometimes the vines are fed in the pens, and sometimes they are fed in the fields. Those farmers who appreciate the value of good manure, make a vast amount of it when their swine are being fatted, while those who do not value it as highly as they should, feed their peas in the highway, or in any other convenient place, where they will not be troubled with the labor and expense of hauling it, and spread it on the fields. Many farmers commence feeding the peas in the vines, while many of them are quite green; and in this way they can be fed for a long time before they become so hard that it would be more profitable to grind them, than to feed them whole.

The quantity of seed per acre varies from two and a half to three and a half bushels; and the yield per acre varies according to the fertility of the soil, and the manner of cultivating it. Some farmers receive not more than ten bushels per acre, while many who make and apply a good burden of barnyard manure, obtain over thirty bushels per acre, in many instances, although that amount is a very large yield, and much more than the average number of bushels throughout the county.

Modes of Harvesting Peas.

I visited several farms where the peas were being harvested, and it was truly surprising to see what a laborious and expensive job some farmers would make by the manner of harvesting them.

In many instances they gathered them into heaps about the size of a good forkfull, by *rolling* them, as it is termed. This is done with a grass scythe, by running the scythe into the uncut peas, and then by continuing to step backwards, rolling them over and over, cutting off some and pulling up others, until a bunch is collected large enough for a forkfull. But this is a very slow way of harvesting them.

Another way is to rake them with the old fashioned horse rake, or with a revolving rake while the vines are wet with dew or rain, so that they will not waste by shelling. When they are gathered in this way, there will be vines beneath the winrows, which the rake does not pull up or sever from the roots. In such instances, the winrows are thrown into bunches with forks, when those that have not been loosened with the horse rake, must be pulled up or broken off with the fork, which makes much unnecessary labor.

The best and most expeditious manner of harvesting them, and which was adopted in some instances, is to rein the horse away from the unraked peas as soon as the rake was filled, and empty it on the ground where the peas had been raked. According to this plan of harvesting them the horse and rake must be turned around every time the rake is emptied. But this is a much more expeditious and easier way than either of the others to which allusion has been made.

I observed that the best farmers did not allow their peas to become dead ripe before they were harvested, but that many of the pods would be quite green when they were raking them. When they are allowed to become quite ripe many of the pods will be so ripe that a great many will be lost by shelling.

When a farmer has a large field of peas, as they are very bulky, it is not practicable to house them, therefore they are put usually into very large stacks, and in some instances they are fed to sheep during the foddering season, and small shoats, and swine of all kinds, are wintered on them, and they thrive well.

When peas are ground into meal for horses and neat cattle, they are usually mingled with an equal amount of oats and Indian corn, as the meal of peas is quite apt to operate as a laxative when fed to horses or neat cattle. Ground peas and Indian corn and oats, or wheat bran, in equal quantities, which is fed to stock of almost all kinds, I can testify is most excellent feed for calves during the foddering season, and good also for cows that give milk, for increasing not only the quantity but the quality of it. Let a good cow have good cornstalks and good hay daily, and be slopped with the meal of peas and Indian corn and wheat bran, and there will be no complaint about poor and thin milk and white, sickly looking butter.

Peas before Wheat.

As peas usually take possession of the soil when it is in a good state of cultivation, the crop is considered to be a good one to precede a crop of winter wheat, as the soil is left remarkably clean, and in good tilth, with only once plowing and harrowing for the reception of the seed. In some localities, however, where there is a preponderance of clay in the soil the ground is plowed in autumn after the pea crop has been removed; and the next spring, after being plowed, spring barley or wheat is sowed or drilled in, when a very remunerative crop is obtained, providing the soil is not too wet for a good crop to grow. So far as I made inquiry, both among good farmers and bad ones, they prefer to raise a crop of peas before sowing winter wheat to allowing the soil to remain in summer fallow, unless the soil is so overrun with noxious weeds as to need summer-fallowing to subdue and eradicate them.

I saw a great many fields from which a crop of peas had just been harvested, which were almost as clean as a summer fallow, which has been well taken care of—and much cleaner than many fallows which were in so good tilth, that a man could excavate a hole with his boot, down to the subsoil, with very little exertion.

Peas an Exhausting Crop.

Many good farmers with whom I conversed on this subject, contend, that a crop of peas will exhaust the soil less than any one crop of cereal grain. They contend, that by their broad system of large and porous leaves, they obtain far more nutriment from the atmosphere, than those plants which are supplied with very thin and small leaves; and that they stifle the growth of noxious weeds, which exhaust the soil. This coincides quite favorably with the theory of some vegetable physiologists, that leguminous plants exhaust far less than cereals. But, I am inclined to believe, that this depends in a good degree on circumstances. Peas and beans also, are leguminous plants, and I am well satisfied that they exhaust the soil much more than we are willing to admit. It is not denied that leguminous plants draw a good supply of nourishment from the atmosphere until fructification commences; and could they be removed from the soil before the fruit begins to form, they would exhaust but little, providing they could be consumed on the farm, and the manure returned to the soil. But, when plants are allowed to stand until all the seed has come to maturity, a large quantity of the nutritive matter of the soil is sucked up in forming that seed, which, of course, exhausts the soil.

As a very small proportion of the nutritive matter taken from the soil to produce the wheat crop, is ever returned to the soil in the form of manure, wheat is considered a very exhausting crop. It not only exhausts the soil where it grows, but it impoverishes the farm, as no other field is improved in fertility, while another may be somewhat impoverished. But as peas are about all consumed on the farm where they are produced, when the system of farm management is as good as it should be, in order to render farming a paying, and at the same time a progressive system of agriculture, they may be set down as much less exhaustive to the soil than either of the cereals, unless they were consumed in the same manner. A crop of peas when properly consumed by stock of any kind, will yield a great amount of the best of manure, which, if it is properly saved and returned to the soil which produced the peas, will return an ample compensation for all the elements of fertility which were taken up in the production of the crop.

In one case, peas would exhaust the soil; and in the other they would improve its fertility, when they are raised in rotation with other crops, and none of the manure of the farm wasted. S. Edwards Todd.

[For the Country Gentleman and Cultivator.]

CHEAP FENCING---SOD FENCES.

If farmers should estimate the actual expenses of keeping their lands thoroughly fenced, they would be astonished at the annual outlays to effect this object. With many the business is so carelessly and hastily done, that continued repairs or loss by damage to crops from wandering and mischievous cattle, that it actually costs them more than it would have done to have formed safe and durable enclosures in the commencement. In short, expensive as good fences may be in the outset, they are the only economical ones that can be made. Hence, heavy wall, where permanence is required, and where the material is at hand, is entitled to the first place in the economy of fencing. Next the rail fence has its advocates. There was a time when its cheapness entitled it to credit—when rail timber was cheap. We have seen rail fences so thoroughly made that they stood from twenty to twenty-five years. In such cases, however, the timber was good, and great care taken in laying and staking. But in the older sections of the country, rail timber is becoming scarce. The price of good chestnut rails has advanced one-half in twenty years. The eagernes for more cleared land, has removed most of the timber, and the introduction of chestnut, from the beauty of its grain, to finer uses in manufacture, promises to prevent its use much longer for rails or firewood. Something else must be used for fences. Where stone can be obtained, they will probably be more generally used.

When we commenced we had in our mind the *turf* fence, which is becoming somewhat common in this vicinity. It is admirably adapted to line fences and along the highways, especially in low lands, where it fences and drains. The manner of construction is, to mark the width of the fence at the bottom, which, of course, is determined by the height to which the fence is to be carried; then the turf is handsomely cut on either side, and laid up in a line with the grass side out. The space between the two line of turf or inside of the fence, is filled in with earth from beneath the turf, or small stones, or in fact any thing sufficiently compact to make a solid bank. Then another tier of turf is cut and laid upon the former one, and so on until the fence is completed, with a fine slope from the bottom upward. The cost of such a fence, four feet high from the surface or five and a half feet from the bottom of the ditch, has been seventy-five cents a rod; and taking the ditch and embankment, it is ample protection against any animal.

These fences can be made at any time except when the ground is frozen, but are better made as early as June or July, so that the earth may become well settled, and the sides well sodded, before the fall rains come on or the frosts of winter set in.

The appearance of the fence when it has stood a short time is very fine, being a breastwork of verdure, while it actually takes no more land than an ordinary wall, for there is feed all over its surface. So far it promises durability simply from the protection the turf affords, but it would probably be benefitted by setting plants disposed to make much root on the top of the embankment.

Another style of fence, cousin to the above we suppose, has been somewhat adopted—is first to set posts at proper distances for fence posts; a ditch is then dug on one side, and turf foundation carried up, over which the fence is finished, with two or three narrow boards, the number being determined by the depth of the ditch and height of the embankment. This fence is cheaper than one of all boards, and has the further claims that sheep or swine cannot crawl under it, and that the ditch subserves the purpose of drainage.

At present these two kinds of fence promise cheapness and durability. What the future may reveal concerning the latter, however, time must determine. Either of these are more pleasant to the eye than ragged walls or the old fashioned zigzag rail fences.

Richmond, Mass., Nov., 1861. WILLIAM BACON.

[For the Country Gentleman and Cultivator.]

A CHAPTER ON TOBACCO.

Eds. Co. Gent.—As the old song has it, "Tobacco is an Indian weed," and a vile weed it is too; nevertheless, men and women, and even children, will in one form or another make use of it. Millions of people daily chew, smoke, or snuff it, and they will continue so to do as long as water runs and tobacco is grown, and it is a nearly useless task to argue and reason with them of the expense of it, or of its deleterious effect upon the human system, or of the filthiness of the habit. In despite of all these, chew, smoke, and snuff they will, whether tobacco is ten cents or fifty or more cents a pound, or cigars are two for a cent or ten cents for one cigar. It makes but little difference—indulge in the luxury they will. In these matters this is yet a free country, and every one has the privilege of doing as *he* or *she* pleases—providing they do *right*, and enact no *wrong* in their doing. And it does not well become me, an habitual user of the weed of forty years standing, "to get up in meeting" and declare the use of tobacco wrong. No man is obliged to bear testimony against himself.

The truth is, mankind are as the poet Burns said, "an unco squad," having many evil propensities, and unfortunately too many of us are prone to gratify them. Therefore we must take human nature as it is, and men and women as they are, and a portion of them will use tobacco, despite all the scolding and lecturing of a whole army of self-styled reformers and anti-tobacco societies, to say nothing of the expense—which, by the way, is no trifling sum with thousands, both of the rich and the poor. At the low price tobacco has been selling for years past, it has cost many a stingy farmer from $5 to $15 per year for tobacco for his and his family's use. If his town or county should assess upon him such an additional *tax* for educational or other public purposes, we should probably soon hear him talking loudly about the *right of secession.*

Tobacco has risen very much in price during the past six months, and if this deplorable war continues for some two, three or more years, as some persons predict, it will reach a higher figure per pound than the most inveterate chewer or smoker ever dreamed of, unless a large portion of the farmers of the free States go into its culture—if not largely, they should raise enough for home use. The plant can be successfully and profitably grown in all the "Free States," as was the almost universal practice among the farmers here in central New-Hampshire, half a century ago. I have recently inquired of several of our "oldest inhabitants," in reference to its culture, curing, &c., and find they were precisely as now practiced in Connecticut and other sections where grown upon a large scale.

The past season I grew a few splendid plants. For smoking, this "home grown" is tip-top, and for chewing I get the "natural leaf," pure and undefiled, and uncontaminated with the sweat and tears of the negro slave, or of copperas, licquorice, bacon rinds, and other filthy stuff, as is the case with some of the manufactured tobacco from "Dixie land."

Self-interest and a just pride of independence should prompt farmers, as far as possible, to raise every necessary farm product for family use—tobacco included, if needed. But some will say, tobacco is wholly unnecessary, and that the culture of it is immoral; all that may be true. By the same rule it might be objected to the raising of corn and rye, because from them they distil whiskey. So of hops and barley—because they are converted into lager beer—grapes, or its juice into brandy. Some one has said that man was a bundle of habits, and such is the force of one of these habits, that some persons, if they cannot purchase tobacco, will beg it—if they cannot beg it, will steal it if they can. I hold that it is better to grow it than to obtain it by either of the above named means. Therefore I go in for raising the weed, and advise others, if they can't get along without it, to do likewise. Any one that can raise good cabbages, can raise tobacco. Those that wish to go into its culture on a large scale, will find ample directions in the N. Y. State Agricultural Transactions, 1859, with well executed plates illustrating the various processes, from the seedling plant, till the crop is ready for market, by the Hon. GEO. GEDDES. The COUNTRY GENTLEMAN will confer a great favor on many of its readers by republishing the whole essay, with the plates—say about the 20th of next March.

N. H., Nov., 1861. L. BARTLETT.

Our correspondent seems to have overlooked the fact that the Essay of Mr. GEDDES, on the cultivation of tobacco, was published in the COUNTRY GENTLEMAN of September 27, 1860, with all its illustrations. It was also published in THE CULTIVATOR for 1860, Nov. No., page 338.

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[For the Country Gentleman and Cultivator.]

PREPARATION OF BONES FOR USE.

EDS. COUNTRY GENTLEMAN—In your paper of Nov. 14, you ask for a practical and inexpensive method of preparing bones for use.

I will give you my way, which is so simple that, although I have practiced it for years, I should not have thought of parading it in your columns, but for your inquiry, and also because our friend HOWARD of the Cultivator, who notices and remembers everything practical and useful, commended it in his last week's paper. I set an old cask with one head in some convenient spot back of the house, in the spring, and of the bones which have accumulated through the winter, I throw in enough to cover the bottom; then enough of unleached ashes thoroughly to cover them; then another layer of bones, then ashes, and so in alternate layers until the cask is full. On top is placed a sufficient covering of ashes, loam or charcoal dust, to prevent the escape of any gas. I usually wet down the ashes as I proceed, and leave the cask exposed to the weather, that they may be kept damp. By the next spring, when I wish to use them, the bones are thoroughly digested and in a fit condition to use.

By this management I preserve all the material of the bones, and it stands to reason that they must be more valuable than those from which the animal matter has been extracted by the soap boilers, and which are then burnt for the sugar refineries, and then made into superphosphate.

I usually take the mixed bones and ashes, and compost with well rotted manure, a liberal sprinkling of plaster, a little guano and salt, and a load of sweepings from the blacksmith shop, of iron scales, charcoal dust, horse hoof parings and the manure made there. This I apply to trees, especially pears.

The growth caused by this is astonishing; as you perceive, this compost contains all the requirements, both for growth and fruit, better than any purchased superphosphate, for it has the potash so essential to the pear, and the iron, which is very important. I also prepared my grape border with this.

I not only use the bones saved from our own family, but buy a good many, paying Irish and German boys for collecting, about half a cent per pound, which is the market price obtained by the cutlery works for their refuse bones.

I have great faith in the efficacy of both ashes and bones, and I think this combination of them is both cheap and useful. JAMES S. GRENNELL.

Greenfield, Mass., Nov. 17. 1861.

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[For the Country Gentleman and Cultivator.]

Two Words about Raising Potatoes.

Sometime this year I saw in the Co. GENT., the advice of a subscriber not to plant potatoes on the same ground two consecutive seasons. This may be prudent in some cases, but the opposite course has been successful with me. I planted last spring, potatoes on the same ground for the fourth time, year after year, and without manure of any kind, and they grow better and larger. This year I tried the *California potato*—one weighed 2 pounds and 10 ounces, and the greatest number between one and two pounds. The soil is a part clay, the balance a mixture of clay and black loam. We call the California potato a most excellent kind for the table and for feeding—very productive and free from disease, and far superior to the Prince Albert so much praised. B. JAIN.

Dane Co., Wisconsin.

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[For the Cultivator and Country Gentleman.]

PREPARATION OF NIGHT-SOIL.

EDS. COUNTRY GENTLEMAN—In reply to your correspondent from Cannelton, Ind., in your paper of the 7th Nov., I beg to enclose an extract from a pamphlet lately published by a clergyman in England, entitled "National Health and Wealth," by Rev. Henry Moule:

"The great agent in this mode is dried surface earth, the extent of the capabilities of which, both for absorption and for deodorizing offensive matters, I accidentally noticed about seven months ago, and the truth and correctness of which observation has been proved by daily experience.

"Under a strong impression of the evils occasioned or likely to be occasioned, by the vault or cess-pool on my premises, and feeling it to be a nuisance to my next neighbor as well as to myself, I filled it up with earth, and ever since I have had everything that would otherwise have gone into it, received and removed in buckets. And even this mode of removal, though offensive in idea, has proved far less so in reality, than even a very small portion of the evils it is intended to remedy. At first the contents of these buckets were buried in trenches about a foot deep in my garden; but on the accidental discovery that in three or four weeks after being thus deposited, not a trace of this matter could be discovered, I had a shed erected, the earth beneath sifted, and with a portion of this the contents of the buckets were every morning mixed, as a man would roughly mix mortar. The whole operation of removing and mixing does not occupy a boy more than a quarter of an hour. *Within ten minutes after its completion, neither the eye nor the nose can perceive anything offensive.*

This was the first observation I made. The next was this—that when all the earth *which did not exceed three cart loads*, had been thus employed, that which had been first used, was sufficiently dried to be used for the same purpose again; and it absorbed and deodorized the offensive matter as readily as at the first time; and so singularly does this capability continue, that a portion of it has been used for a fifth time for the same purpose; and thus all that offensive matter, which otherwise would have been wasted in the vault, a nuisance to my house and the neighborhood, and a source, it may be, of sickness and disease, was converted into a mass of valuable manure, perfectly inoffensive both to the eye and nose.

"I have the same day submitted some to strong fire heat, and that which unmixed with earth, would under such heat have been intolerable, in this mixed state emitted no offensive smell whatever." T. E. C.

St. Hilaire, C. E.

THE EXHAUSTION OF SOILS.

In visiting the Experimental Farm of J. B. LAWES, Esq., at Rothamsted, in 1859, Mr. L. pointed out to us land upon which wheat had been grown for the past eighteen years consecutively, in plots, without manure, manured with farm-yard manure, and manured with several other substances. These experiments were referred to by him in a paper presented at a late meeting of the British Association. Tables were presented showing the amounts of the different mineral constituents taken off in the crop from the respective plots. The variations in the composition of the ash of both grain and straw, dependent on variations of season, and consequent character of development and maturity, had been first pointed out—the general result being that, with an unfavorable season, there was a slight, though appreciable decrease in the percentage of lime and potash, and increase in that of magnesia; and again, an increase in the percentage of phosphoric acid and of silica, and, especially in the case of the straw ash, a decrease in that of sulphuric acid.

The published summary of the paper referred to, goes on to state that when ammoniacal salts were used alone, year after year, on the same land, the composition of the ash of both grain and straw showed an appreciable decline in the amount of phosphoric acid, and that of the straw a considerable reduction in the percentage of silica; the amount of mineral constituents in the crop of a given area of land was very much increased; much more so than when a liberal supply of mineral constituents alone was used. But in neither of these cases was there anything like the amount of mineral constituents obtained in the crop that there was when the ammoniacal salts and mineral manures were used together, or when farm-yard manure was employed. The deficiency alluded to in silica and in phosphoric acid, and a deficiency also apparent, but not so great, in potash and magnesia, were not surprising, however, when it is considered that in these experiments, in which both corn and straw were annually removed, without the usual periodical return of farm-yard manure, there had been annually taken from the land, by the use of ammoniacal salts, about five times as much potash, about twice as much phosphoric acid, and about twenty-five times as much silica as would be removed under a system of ordinary rotation with home manuring and selling only corn and meat; "in fact, in sixteen years there had been taken from the land as much potash as would require eighty-two years, as much phosphoric acid as would require thirty-two years, and as much silica as would require four hundered years of such ordinary practice to remove."

Notwithstanding this extraordinary consumption of these mineral materials,—a consumption which had been considerably exceeded for fifteen years past on the farm of Mr. Smith of Lois Weedon, the crops on the latter farm are not yet failing; and it was calculated that upon a soil of one foot in depth, "with the ordinary rotation, *with home manuring*, and the selling of only corn and meat," it would require "about 1000 years to exhaust as much phosphoric acid, about 2000 years to exhaust as much potash, and about 6000 years to exhaust as much silica, as, according to the average results of forty-two analyses relating to fourteen soils of very various descriptions, had been found to be soluble in dilute hydrochloric acid. Many soils had, doubtless, a composition inferior to that here supposed. In a large proportion, however, the amounts of the above constituents, assumed to be soluble in dilute hydrochloric acid, would probably be available for plants long before the expiration of the periods mentioned, whilst in a large proportion, there would still be further stores eventually available within a greater or a less depth from the surface."

"But the exhaustion of mineral constituents by the sale of corn and meat alone was, in reality, not so great in the ordinary practice of this country, as has been assumed for the purpose of the above illustrations. Where there was no purchase of cattle food, or of artificial or town manures, the sales of corn and meat would, on the average, be much less than were taken in Dr. Gilbert's and Mr. Lawes' estimates; and where such materials were purchased with any degree of judgment in the selection, there would always be much more phosphoric acid (otherwise the most easily exhausted constituent,) so brought upon the land, than would be obtained from it in the increase of produce yielded; in fact, under such conditions, in many soils, potash was more likely to become deficient. Again, by no means the whole of the mineral consttiuents sent from the farm in the form of corn and meat, will reach the sewers of our towns, and thence our rivers; a not inconsiderable portion finding its way back to the land in some form. In addition to which, imported corn, meat, and other materials, will contribute something to the restoration of our own cultivated land. It is at the same time certain that so much of the refuse matters of our towns as becomes diluted with water in the degrees recognized under the present sewage system, will be applicable as manure on the large scale, only to succulent crops, and especially to grass land; and so far as this is the case, they will of course, not directly contribute to the restoration to the land under tillage of the mineral constituents sent from it in its produce of corn and meat. When other descriptions of produce than corn and meat, such as roots, hay or straw, are largely sold, compensation is generally made by the return to the land of stable or town manures of some kind. If this be not done, the loss of mineral constituents may, indeed, be very considerable."

These facts were presented (and enlarged upon more fully than our present limits will permit us to go,) mainly with the view of controverting LIEBIG's recent position—which implies, if we understand it correctly, that what is known as *good farming* at the present day, is totally inadequate to prevent the exhaustion of our soils. We have always claimed, and the very careful arguments of Mr. LAWES and Dr. GILBERT go to show, most conclusively, that with the careful *economy of farm manures*, the proper *deepening of the soil*, the well arranged *rotation of the crops*, the farmer will be enabled to sell both grain and meat without risking at all the impoverishment of his land. If these sales of grain and meat *pass beyond a certain limit*—and then only—the purchase of *artificial fertilizers* becomes necessary. The inference drawn by Dr. Gilbert and Mr. Lawes as regards the English farmer, was, that while the importance of applying to agricultural purposes as much as possible of the valuable manuring matters of our towns must be insisted on, at the same time they believed that modern practice does not tend to exhaustion in anything like the degree that Liebig and others have supposed. And so for the American farmer, we may lay it down as a general rule, that he must first exhaust his means of economizing and manufacturing the manures of the farm and barns and household, before he need think of buying fertilizers to any very great extent; and we may add our belief, not only that "the exhaustion of soils" will then become to him an altogether inexplicable phrase, but also that the *improvement of soils* will be a process which he can watch with annually increasing gratification and profit.

STUMP MACHINE.

A correspondent in the Nov. No. of The Cultivator, inquires for a good stump machine. We have one now in operation, which acts satisfactorily. I will enclose the maker's advertisement. A. F.

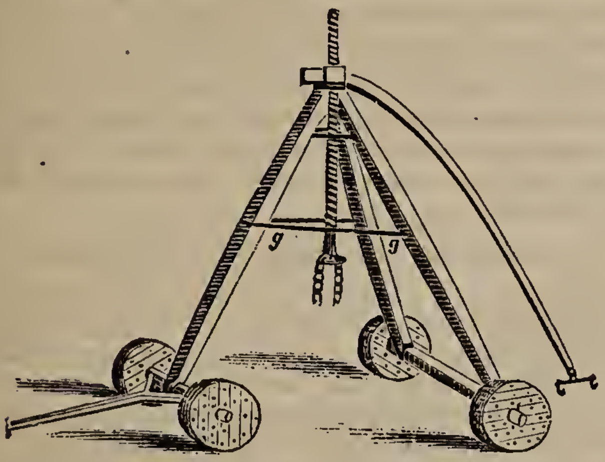

Fig. 1.

This stump machine is manufactured by John Thomas of Hamilton, C. W., and costs from $30 to $150, according to size—we should question if any but the largest would be strong enough for all cases. It is not *new*, as supposed—we have seen one similar nearly twenty years ago; the accompanying, which we copy from the Country Gentleman, Vol. X, p. 139, is essentially the same. The figure nearly explains itself, the chain at the lower end of the screw being attached to the stump as shown in Fig. 2. Every part must be strong—the number of the Country Gentleman referred to gives the dimensions of all the parts.

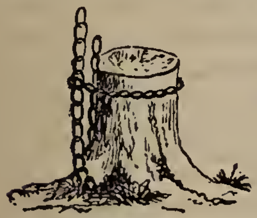

Fig. 2.

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THE OSIER FOR BANDS.

Every farmer should have a small plantation of the osier for making bands for binding cornstalks, threshed straw, &c. Rye straw has been extensively used for this purpose, where it is raised and can be procured—but our opinion is that a square rod of the best osier (*Salix purpurea,*) is worth nearly an acre of rye. It is also more easily managed, for what a man would carry of the osier in his arms, would bind as much straw or stalks as half a wagon load of rye straw. A great deal of time, as every farmer knows, is wasted in trying to pitch with a fork, cornstalks which have been broken from badly bound bundles. Willow bands, properly put on, would save all this trouble. During the past very wet autumn, we were compelled to draw into the barn much of the corn crop before husking. It was very easily accomplished by first binding each shock firmly together with osiers, making large bundles, easily handled.

When some ingenious inventor shall construct a machine for binding wheat after the reaping machine, by using the shoots of the willow for bands, binding machines may become common.

The Salix purpurea may be obtained of many nurserymen, in the form of cuttings, and each cutting a foot long, and two or three years old, or even younger, will soon make a tree, if set in rich mellow ground, upland or otherwise, provided the soil is well cultivated before setting out and for a few years afterwards.

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Too much company is worse than none.

LOSS FROM WEEDS.

Very few of our farmers seem to be aware of the great loss they sustain annually, from the growth of weeds of one kind or another, with which quite too many of our farms are overrun. The late Sir John Sinclair made some experiments on this subject, the results of which we annex, and which are worthy the consideration of all cultivators who have failed themselves to discover to how great an extent their crops are lessened by weeds:

"1. Seven acres of light gravelly land were fallowed, and sown broadcast; one acre was measured off, and not a weed was pulled out of it; the other six were carefully weeded. The unweeded acre produced eighteen bushels; the six weeded acres 135 bushels, or 22½ per acre, which is 4½. bushels, or one-fourth more produce in favor of weeding. 2. A six-acre field was sown with barley, in fine tilth and well manured. The weeding, owing to a great abundance of charlock, cost 12s. per acre. The produce of an unweeded acre was only 13 bushels; of the weeded, 28. Difference in favor of the weeding, 15 bushels per acre, besides the land being so much cleaner for succeeding crops. 3. Six acres sown with oats; one acre plowed but once, and unmanured, produced only 17 bushels. Another six acres, plowed three times, manured, and weeded, produced 37 bushels. This experiment proves that oats require good management, and will pay for it as well as other crops. Ten bushels of the increased produce may be fairly attributed to the weeding, and the other ten to the manure."

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[For the Country Gentleman and Cultivator.]

Large Corn Crop in New-Jersey.

Messrs. Editors—Mr. David Padgett of this county, has just had a remarkable yield of corn, and if it has ever been surpassed in this part of the country I should like to hear of it.

He planted three acres of corn upon a clover sward. The ground had been recently marled—top-dressed with good manure in the fall—measured the ground carefully, and from an acre obtained one hundred and seven bushels and one peck of shelled corn.

From the other two acres one hundred and eighty bushels, or ninety bushels per acre.

Mr. P. is one of our most intelligent and industrious farmers, and this statement, as I received it from himself, may be relied upon. Who will now say corn cannot be raised in South Jersey?

We have had one hundred and four bushels of corn raised in this neighborhood before, but this last surpasses anything of the kind ever known here.

Deerfield, N. J., Nov., 1861. S. G. CATTELL.

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[For the Country Gentleman and Cultivator.]

Experiment with Potatoes.

Eds. Co. Gent.—I herewith send you a statement of my success in cultivating ten sorts of potatoes the present season. They were planted on an inverted clover sod, 3 by 3 feet, and hand hoed once. About a teaspoonful of plaster was dropped into each hill when they were planted. Soil, a heavy clay, very wet the latter part of the season. The first eight sorts are seedlings originated by Rev. C. E. Goodrich of Utica, N. Y.

Names.	Amount Planted.	Yield.
Amazon,	½ bushel,	10 bushels
Cuzco,	1 bushel and 4 quarts,	55 do.
Callao,	½ bushel,	14 do.
Central City,	¾ bushel.	12½ do.
New Kidney,	20 quarts,	8 do.
Coppermine,	28 quarts.	26 do.
Pinkeye Rustycoat.	1 bushel.	40 do.
Garnet Chili,	½ bushel.	20¼ do.
Prince Albert,	3 bushels.	75 do.

Clinton 5 bushels—not worth digging on account of the rot.

All the old varieties cultivated in this section have rotted badly. P Sutton.

Luzerne Co., Pa., Nov. 11, 1861.

GAS LIME AND ASHES.

The quite frequent inquiries received as to the use of Gas Lime, renders any trial of it in some degree interesting, although the benefit of its application apparently depends very greatly upon circumstances of soil and location, which it is not easy to calculate upon without actual experiment.

Judge Strong recently mentioned to the writer an instance of its successful employment upon his farm in Suffolk Co., on the northern shore of Long Island. The Gas Lime was purchased in a considerable quantity at a cost of five cents per bushel; as it lay in the heap and was scattered from it by the wind, the grass around seemed to derive no benefit whatever from the sprinkling, although the casual scatterings from an ash heap under similar circumstances always show a marked effect. Hence little good was expected. This was several years ago. The Lime was spread at the rate of a hundred bushels per acre on seeding down with wheat, timothy being sown in fall and clover in the spring. The wheat crop harvest showed no apparent result from the Gas Lime, but the first crop of grass was a remarkably good one, and for five successive seasons two tons of hay per acre were cut in the field, when, without the effect exerted by the Lime, a ton and a-half or thereabouts would have been anticipated as the average of *three years*, when the land would have to be broken up, thus giving only three average crops instead of five good ones. So much for the action of the Gas Lime upon the Grass. The soil, it should be added, is a strong loam.

The field was an orchard, which was thus seeded down in part because the trees had never really seemed to be doing very well. That part of the field dressed with the Gas Lime, had been about fourteen years in apple trees; they at once began to grow more vigorously, presenting a striking contrast to their neighbors where the Gas Lime was not applied, and the third or fourth year after the dressing yielded for the first time a good crop of fruit. This present season is the third year that they have been in good bearing; and, owing partially to a careful pruning of branches which had become too thick and numerous, the crop of 1861 was superior to either of the two which preceded it. This year's apple crop alone would perhaps have covered the whole outlay originally involved. So much for Gas Lime, in the present case, as an application for apple trees.

A successful trial on Grass Land had also been made with *coal ashes*, which were sprinkled under the trees on the lawn in Spring. The ground had previously been very thinly covered or almost bare; but the coal ashes, which were spread on at the rate of about a bushel per square rod, brought in a thick and thrifty growth of clover, and the cut of grass was much heavier than where no ashes had been put. Judge Strong was of the opinion that the effect would have been still more beneficial if the ashes had been put on in Autumn instead of Spring.

Wood ashes are largely used as a fertilizer on the farms of Long Island; and, as an illustration of their lasting effect, it was mentioned that it had been common in seeding down a field to apply yard manure as far as it would go, leaving perhaps one-half to receive ashes in its stead. The field lies three years in grass, and is then broken up for corn, manured in the hill; but Judge Strong thought that the corn crop produced upon the part of the field where ashes had been put on was invariably more thrifty to the eye from its first start, and yielded perhaps one-third more heavily than the part of the field to which barn-yard manure only had been applied. It has lately been found the better practice to apply the ashes and manure "half-and-half" upon the same surface in place of the foregoing practice. The application of the leached ashes was at the rate of about a hundred bushels per acre, and of the manure twenty-five loads of say 30 bushels per load.

Long Island farmers (at least in this vicinity) always make Indian corn the first crop after breaking up—the average production of a good farm being perhaps sixty bushels of ears per acre, with a hundred as an occasional good yield. The second crop is oats, of which 40 bushels is considered a fair return, generally without manure; after which a more or less liberal application of ashes, yard manure, &c., takes place, and the land is seeded down with a crop of winter grain, to remain three years in meadow. This part of the Island probably produces scarcely as much wheat as its inhabitants consume, and the Indian corn is mostly fed out upon the farms. Hay is an important crop for sale, and considerable quantities of fertilizers are annually purchased, as will be seen from the above outline, by all who take much pains or pride in their pursuit.

Thrashing Machines---Clover-Hullers.

I wish to get a two-horse power thrashing machine and clover huller, and being unacquainted with the numerous kinds, would like some of your correspondents to inform me by letter, which is best, most durable, and easiest for horses—and especially adapted to cleaning grass seed. I raised this year 125 bushels of timothy seed, and I estimate lost 15 to 20 bushels for want of a suitable machine to remove straw and chaff. What are the advantages of an overshot thresher? Can one be procured in Chicago, as good and cheap as in New-York? What is the price—also price of a wood-sawing machine? How much wheat will such a thrashing machine thrash in a day, and how many hands will be needed. A. F. *West Liberty, Iowa.*

Probably Wilbur, Emery & Co. of Chicago could furnish all these machines, of good construction, and at reasonable rates. The price of a good clover-huller is about one hundred dollars. The price of a good two-horse endless chain power, with all parts complete, is about $120; a thrashing machine and cleaner about as much more; or a thrasher and simple separator of straw, about $40 or $50. Such a machine, driven by two horses requires about four hands in all, and will thrash some 100 or 150 bushels of wheat in a day—but varying with the size and weight of the horses, facilities for pitching, number of hours run, and the good order the machine may be kept in. The overshot thresher delivers the straw and grain at a more convenient height for the cleaner or separator. A wood-sawing machine varies in price with the size of the saw, but a good one may be had for 35 or 40 dollars.

Will some of our correspondents who have had careful experience furnish the other information asked for—although it may be asking too much for any one to decide which is the best machine, until he has tried them all. Our correspondent can hardly expect them to write private letters and pay postage, to give him the desired information, unless they may be interested readers, whose statements he might think were not impartial.

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Sorghum Molasses.—In these times of embargo and non-intercourse with our southern brothers, it is found very convenient for each farmer to get 25 or 50 gallons Sorghum Molasses from a very small patch of ground, by hauling his cane to a mill near by, and getting it made on shares. The first year the cane was introduced among us, I bantered a neighbor to go in with me for a small bag of the new and untried seed. We were neither of us willing to venture $1, but we went 50 cents each, and I raised 23 gallons of most excellent molasses from a trifling amount of ground, and that too with a clumsy contrivance of a wooden mill which wasted about one-third of the juice. I know of a man who has two acres of cane this fall, and when I last saw him he expected to lose all, on account of the mill that he had depended on having been sold and moved away. Why cannot some cheap and simple mill be invented, so that every farmer could make his own molasses? I think if I was a worker in iron, I could contrive such a one myself. R.

Switzerland Co., Ind., Nov. 13.

[For the Country Gentleman and Cultivator.]

REFRESHING THE MEMORY.

Messrs. Editors—I once knew a man, whose wife was rather feeble, and when the good woman's health was inquired after, his common reply was, that " she *enjoyed* rather poor health." Now, I am of the opinion that many "enjoy the same blessing," in regard to their memories. Their retentive powers seem to be defective; so much so, that it would be difficult for them to give an intelligible account of what they had read, an hour after the reading. Whether this arises from some defect in their " making up," or from inattention, I shall not pretend to say—perhaps it arises in part, from both causes.

But these afflicted ones should not be overlooked. I therefore propose to repeat a few of the *many* things worth remembering, that have appeared from time to time in the Country Gentleman, for their benefit—hoping that "line upon line," will have the desired effect.

1. Remember to treat all animals that are dependent upon you for their comfort, during these cold months, with humanity. See that they are warmly housed, and have a full supply of nutritious food. Feed roots and meal. See that they do not lose flesh the fore part of winter. Increase the good things to milch cows, towards spring just before calving time. Don't begin and end with straw and corn buts.

2. Remember to keep your stock clean from filth by carding, and by giving them a clean bed of straw to lie upon. Don't attempt to promote thrift and growth, by applying manure to their hides. It is far better to make the application to the soil, and thus increase the yield of hay, roots and grain. These, fed to them with a liberal hand—though a more roundabout way—will be far more efficacious.

3. Remember to clean out the cattles' mangers once a day. Less fodder will be wasted, and they will relish their food much better. Give them *enough*, but only so much as they will eat up clean at each foddering, if the fodder is good. Cattle will reject their food, after having breathed over it awhile. And further, clean up the scatterings made by foddering, that nothing be lost. Some men have got rich by *saving.*

4. Remember that pure water—not a mud-puddle—and a plenty of it, is essential to the health and thrift of all animals. Don't require your cattle to go a mile through the snow, with the thermometer at or below zero, and then, upon their knees, drink from some dirty slough, through a hole cut in the ice and mud.

5. Remember to keep the manure snugly piled, and mix a plenty of absorbents with it—straw, saw-dust, muck or turf are good—to hold the liquid. If your manure heap has not the same defect that your memory has—leaky—you need give yourself no anxiety about cellars or sheds to stow it in, as with a good supply of straw or other material to take up the liquid, the rain or snow that falls upon it will do it no damage, but will forward its fitness for the land.

6. Remember to house all farm tools. Those not in daily use should be thoroughly cleaned before putting away. If any are out of repair, put them in order. Don't winter the plow, in the corner of the fence, the horse-rake in the middle of the meadow, or the mower in the door-yard. This will be worse for their constitution than a summer's work. All tools in daily use, should be cleaned after using—shovels and dung-forks should not be allowed to become coated with frozen and dried manure. They are much more comfortable to use, when kept clean, besides they will last much longer.

7. Remember to draw up to the door, saw, split and pile up under cover, a year's stock of wood, during the winter. It is bad economy to burn green wood; besides it is a violation of the connubial vow, to require "my dear" to cook the dinner with green soggy wood. Any woman so treated ought to apply for a bill of divorce, and if the court should refuse the petition, she ought then to secede—peaceably, if she can—but secede at any rate.

8. Remember to do everything well that you undertake. Adopt the rule, that anything that is worth doing, is worth doing well.

9. Remember to be neat and systematic about all your work—particularly in doing the chores. Chores are quite an item in the winter, and they can be done much more expeditiously, where there is system in doing them, than when done at haphazard.

10. Remember to take the Country Gentleman. Many think this the best agricultural paper published for practical farmers, and as I like to be in the crowd I am inclined to the same opinion, although I read one or two others. It is passing strange that so many should entertain the opinion, that nothing can be learned in regard to farming. Every farmer should take some good, practical journal, that he may avail himself of the experience and practice of others. There are humbugs enough in the course of the year, in most papers, to pay the expense; and valuable information enough to pay for three or four papers—the humbugs may be forgotten.

11. Remember that a great war is upon us, and that half a million or more of the brave defenders of the Union must be fed and clothed. Therefore, it becomes the duty, as it is to the interest of every tiller of the soil, to put forth renewed exertions—to add a few more acres to the growing crops—to till the soil with greater diligence and care, and thus increase its productiveness, that the wants of our soldiers, and the expense of this unrighteous war, waged by traitors and thieves against our government, may be met. And that we may have bread enough, and some to spare, to our amiable cousins across the water. J. L. R. *Jefferson Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

CORN FODDER FOR DAIRY FARMERS.

Messrs. Editors—Could one-half of my brother farmers, who ridicule book-farming, be induced to plant next spring, one half acre, each, to fodder corn, who have a dairy of ten cows, the rows two feet apart, with 20 or 25 kernels to a foot, and begin to feed about the first of September, and add six weeks or two months to their dairy season, they would be inclined to look pleasant at their success, and let the name alone. My experience will warrant $25 for the half acre, if properly managed, with very little labor.

I want to add that I have stabled five cows nights through the summer, filling the drop behind them with turf, procured mostly by plowing moss knolls, taking off the turf, making them even, and with the help of one horse and a few white Chester pigs, have made 100 full cart-loads of good compost for my meadows, putting it on in October, and have turf enough in my yard and hog-pens for another hundred in the spring. I will gladly listen to a better course on a small farm.

West-Winsted, Conn., Dec. 3, 1861. JUDSON WADSWORTH.

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[For the Country Gentleman and Cultivator.]

LARGE CROP OF ONIONS.

Messrs. Editors—Having in times gone by given you some information as to the culture of *the onion* in this vicinity, I am now happy to inform you that Mr. G. W. Curtis of Marblehead, has the present season raised more than *nine hundred bushels* of onions, of a superior quality, on a single acre of land. I did not see the crop myself, but have the certificate of J. J. H. Gregory, Esq., an entirely reliable witness, as to the *growth* and *measure.* Considering the many embarrassments in the culture of the onion for several years past, this crop of Mr. Curtis is highly encouraging. Many other crops from *three* to *five hundred bushels* to the acre, have been secured in this vicinity the present season. The *drouth* that prevailed for several weeks in the summer was more detrimental to the progress of the maggot than the growth of the plant.

South Danvers, Mass., Nov. 16, 1861. JOHN W. PROCTOR.

[For the Country Gentleman and Cultivator.]

STONE BOATS ON WHEELS.

In many localities, where there are many rocks and stones to be hauled on stone boats which slide on the ground, two, and sometimes three teams are employed to haul what one team would do with ease, were the load placed on wheels. A stone which will weigh ten or twelve hundred pounds, will make a good load for a team, and it is very fatiguing for them to haul even that amount any considerable distance. But, if a stone is on wheels, a team will often haul with ease a load more than twice as heavy as their combined weight.

On one of the shores of Long Island Sound, I saw workmen hauling stone and boulders a distance of about one hundred and fifty rods for building a pier; and I observed that a man with one span of horses, would haul nearly twice as heavy a load on his wheel stoneboat, as another man did with two yoke of oxen on a common stone boat.

To make a good stone boat on wheels, procure two good plank about twelve feet long, and from two and a half to three inches in thickness, and about eighteen inches wide. Now bolt a piece of a timber about eight inches wide, on the under side of an axletree supported by two wheels, and then bolt one end of these two plank on the *under* side of the timber, letting the bolts pass through plank, timber and axletree. The other end of the plank should be fastened together similar to a common stone boat, by bolting a narrow piece of plank across the ends with carriage bolts. This will be the forward end, and the other end will be beneath the hindmost axletree. A knuckle hinge bolt is fastened to the forward end of the stone boat, rigidly, and a part of it is put through the forward axletree and secured with a key on the top.

When loading very heavy boulders, the forward end of the boat may be lowered clear on the ground and after the stone has been rolled on, the end is then pried up with a lever and secured to the axle tree.

The forward end of the stone boat should be narrower than at the middle and hind end, in order to give room for the fore wheels in turning round. If the road is not very uneven, the boat may be bolted so low beneath the axletrees as to be within six or eight inches of the ground.

A man of very little mechanical skill could make such an apparatus during some stormy day, by using the wheels of a cart for a part of it, or all the wheels of a lumber wagon, on axletrees with or without skeins on the axle arms.

Such a stone boat would be far more convenient and easier for a team, when hauling stone for ditches, than a stone boat that slides on the ground.

No hounds will be needed on the hindmost nor forward axletree. The tongue can be attached to the forward axletree as they often are to light wagons—with hooks and eyes.
S. Edwards Todd.

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[For the Country Gentleman and Cultivator.]

Grain-Producing Capacity of the United States.

Messrs. Tucker & Son—In your paper of Nov. 21st, you quote the remarks of a New-York correspondent of the London Mark-Lane Express to this effect: That "this is likely to be the last year that England may expect any shipments of breadstuffs to a large amount" from the United States. The reader is left to infer that it will be in consequence of our being unable to produce any considerable amount beyond our own wants. This writer, (whoever he may be,) it is quite evident, as we say here in the west, "has not travelled." For either he is sadly duped himself, or else he is trying to dupe his readers, when he tells them that the United States has reached its full capacity as a grain producing country. No man of common intelligence who is at all acquainted, or who has travelled but a *little* even in the northwestern States, will tell you that the resources of any of these States has began to be developed. I will venture the assertion, without the fear of contradiction, that west and south of the lakes, with the single exception of Ohio, no single State has more than one-tenth of her arable land now under cultivation. Look for instance at Illinois, which is comparatively an old State. I have not the late United States census returns now before me, but I have no doubt it would bear me out in saying that less than a tenth of *her* fertile soil has yet been broken by the plowshare. And if with her limited acres under cultivation she has such millions of surplus grains to spare, estimate, if you can, what she may not do in the way of stopping the mouths of England's pauper poor when all her sections and quarter-sections are brought under the plow, and when the resources and capacity of Illinois and Iowa, and the whole northwest, are fully developed, who can then estimate or tell us where to find a market for the grain, the beef and the pork which we cannot use?

The best cultivated parts of New-England do not produce more than one-fourth what the soil is capable of doing under a proper and improved state of cultivation.

Now when the whole northwest, any acre of which is naturally as good as two in New-England, comes to the same cultivation that New-England now has, we can feed "all the world, and the rest of mankind." Talk about estimating the capacity of a country whose navigable rivers are four thousand miles long, with soil as fertile as ever the sun shone upon, and a population whose chief end it is to keep what they get and get all they can—as well might you count the drops in the ocean as to measure the capacity of such a country.

Could I get the ear or the eye of the readers of the London Mark-Lane Express, I would tell them, as I would tell all who love liberty and desire a peaceful and happy home of their own, to come to this beautiful and fertile country of ours, where there is room enough and to spare—come and make farms on these magnificent and unequalled prairies, where the productions of an acre are only to be measured by the amount of labor judiciously bestowed upon it.

Then you shall see and know whether this New-York writer, who doubtless gets well paid for trying to belittle and belie our country, has told you truth, or falsehood as glaring as noon-day.

Butler County, Iowa. Dec. 5, 1861. J. C. A.

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WINTER PROTECTION OF BEES.

This important part of the bee-keeper's duty should be well discussed, and carefully attended to. While many succeed well in wintering bees, others suffer partial and sometimes sad failures.

My neighbor was a successful bee-keeper. He wintered his bees by burying them after the following method:—He dug a place in a dry piece of ground, without regard to protection, about six inches deep, and long enough to place all his hives side by side; then laid a floor with boards, battening the cracks, then laid rye straw lengthwise, threshed with a flail, so that when pressed down by the weight of the hives it would not be less than four inches in depth. He then set a course or layer of the straw of equal thickness as at the bottom on each side of the row of hives, and at the ends, lapping the straw over the top. and then covered the whole with earth, in as perpendicular a position as possible, and retain a covering over the whole surface of the straw, being careful to have all the straw covered, so that mice would not be induced to enter. He then left them thus covered till the season was so far advanced in the spring that the bees could get a living. His success was complete. Less than one-half the honey was consumed than by hives left out doors. Neither mice nor mole ever troubled his bees. Such was the uniform result of many year's practice. I suggested to him to cover the mound under which his bees rested with a roofing to keep off the rains, to which he replied, "Not till I find the present method a failure," which did not occur. D. C. S., *in Prairie Farmer*

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☞ We learn that Mason C. Weld, late editor and publisher of the Hartford (Ct.) "Homestead" (now discontinued) has just become an associate editor of the "American Agriculturist."

NEW PUBLICATIONS.

REPORT OF THE COMMISSIONER OF PATENTS for the Year 1860. AGRICULTURE.

We acknowledge our indebtedness for copies of the last Agricultural Report from the Patent Office, to Hon. J. H. REYNOLDS of this city.

Hon. THOMAS G. CLEMSEN, who signs himself "*Superintendent of Agricultural Affairs of the United States*," opens the volume with Preliminary Remarks, containing some useful suggestions, enlarging upon the importance of the Agricultural Division of the Patent Office, and urging increased appropriations by the Government for its benefit, and for the encouragement of Agriculture. After a brief statement of the operations at the experimental garden connected with the Agricultural Division at Washington, we next have the continuance of Mr. CLEMSEN'S article on "Fertilizers" from the previous Report—an article which will be mainly useful for practical purposes, as it strikes us, from the fact of its rendering easily accessible the various analytical tables showing the composition of different Agricultural Products, which are copied from Morton's excellent Cyclopœdia of Agriculture.

Over sixty pages follow, under the head of "Notes on the Recent Progress of Agricultural Science. By D. A. WELLS, Troy, N. Y." The idea is a good one, to present such a compilation of extracts from the publications of the year, as shall fairly illustrate the progress of either or both the science or practice of Agriculture. In no other way, as we believe, could a better view be presented of what is really going on, "both as regards facts and opinions." But the compiler should not only bring to the task much discrimination and good judgment, with some experience—he should also have at his command the best of our current Agricultural literature, both domestic and foreign. We fear that Mr. Wells' resources were not quite so full as may have been desirable. Some of his selections are very good and appropriate; but as a whole his compilation does not quite attain the character which we think it should possess, as a digest either of the experience that has been put in print, the experiments that have been reported, or the scientific advancement that may have occurred, while not the slightest reference is given to any of the prominent "agricultural events" of of the year in review, or indeed of any other year or period. The paper, however, constitutes a feature in the volume that we should like to have continued in future Reports, if the rich materials which a well-qualified and judicious compiler might employ, could really be put to good and systematic use.

The "Observations on English Husbandry, by Hon. HENRY F. FRENCH, Exeter, N. H.," which next follow, we have read with some attention. The article is a comprehensive one, and at the same time clear and straight-forward. The twenty-six pages, which it occupies, are always interesting, and the views and conclusions expressed, manifest the close personal observation of their author, as well as a careful consultation of standard writers upon this fruitful topic.

The succeeding sixty pages are taken up with an account of "Irrigation, by E. GOODRICH SMITH, Washington, D. C." as practiced in ancient and modern times in different parts of the world. This is a subject to which, in many parts of the United States, more attention should undoubtedly be given, and the information here presented cannot be otherwise than useful to any one proposing to undertake it. But we fail to notice any account of the experiments that have already been conducted in this country, in obtaining cheap and practicable systems of irrigation; and the reader is apparently left to apply for himself the information he obtains.

"Grasses for the South, by Rev. C. W. HOWARD, associate editor of the Southern Cultivator, Kingston, Georgia," is the title of a paper occupying fifteen pages, which our Southern friends may some time have the opportunity, we hope, of consulting to the great benefit of their agriculture. Drs. EMERSON and ELWYN, of Philadelphia, next present a report upon Pleuro-pneumonia, which Dr. J. B. CRAIG of Washington follows in the farther consideration of the same subject. The remainder of the volume is occupied with papers on Bee Culture, by WM. BUCKISCH, Hortontown, Texas; Notes on recent discoveries and improvements in Pisciculture, translated from the German of Dr. FRAAS; Insects Injurious to Vegetation, by P. R. UHLER of Baltimore; several articles on Wine Making and Grape Culture, filling nearly one hundred pages; the Forests and Trees of Northern America, by Dr. J. G. COOPER, occupying thirty pages; and articles upon Tea and Chinese Agriculture, concluding the whole.

Taking the volume altogether, if it fails in some respects to meet the requirements we should like to see filled by a work, of which *several hundred thousand copies* are distributed gratuitously by our government, it is nevertheless such as to compare favorably with its predecessors. That it contains, as heretofore, far more of *second-hand* information, if we may so style it, than of original research or personal experience, is probably owing to a lack which undoubtedly still exists in this country, of the means of obtaining the latter. This lack, however, is now daily diminishing, and the successive volumes issued by the Patent Office, ought by good rights to afford still greater evidences of the diminution than they do.

MANUAL OF AGRICULTURE, for the School, the Farm and the Fireside.

This work, a brief announcement of which has already been given in our columns, prepared by Messrs. GEO. B. EMERSON and CHARLES L. FLINT, and published by Swan, Brewer & Tileston of Boston, is one which bears close examination, and deserves great credit for the system, plainness, and general accuracy which characterize both its design and execution. The father of a family, who desires to make his children acquainted with the principles, and interested in the pursuit of Farming, can scarcely do better than devote the long evenings of the Winter to a careful review of this book with them; and he would not be likely to conclude it without having himself profited by the time thus expended. As a school book we should also warmly recommend its general adoption.

The price of this book is 75 cents, containing 294 pages and nearly 100 engravings. Copies may now be had at this Office, or will be sent by mail post-paid, at the price mentioned.

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THE ANNUAL REGISTER.—I intend to get up a club for your CULTIVATOR, as soon as I get time, and the above subscription for the Co. GENT. will be counted in. One article I find in the REGISTER for 1862, (that on Grape Pruning,) to me is worth the price of the book (25 cents.)

Monroeville, O. S. A.

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PEACH GROWING IN MICHIGAN.—A correspondent of the COUNTRY GENTLEMAN at St. Josephs, says that almost every landholder in that vicinity is engaged in raising fruit for the market, and that more than 30,000 baskets of peaches were sent to market this season.

[For the Country Gentleman and Cultivator.]

A New-Hampshire Farm and Farmer.

MESSRS. EDITORS—During the past week, in company with JOSEPH B. WALKER, Esq., of Concord, I took an excursion to Lower Gilmanton, about fifteen miles from Concord, for the purpose of making a call upon G. W. SANBORN, Esq., and taking a ramble over his extensive farm. While there I took notes of some things that interested me somewhat, and thinking they might also interest some of your numerous readers, I herewith furnish a sketch of the farm, buildings, irrigation, crops, &c.

The Home Farm

Contains about 775 acres, fenced with stone wall into large fields. Every field, including pasture and woodland, has been accurately surveyed and mapped. The map of large size, gives the form of every field and lot, with the number of acres and rods each contain.

The exact location of the farm buildings is put down, and one or two large brooks, with all their windings and curves as they course through these extensive grounds; as also the bearings and sweeps of between five and six miles of open ditches for conveying water from a fifty acre pond for irrigating a large portion of his upland mowing fields.

The map is handsomely executed, lettered and colored. Tillage fields being of one color; the pastures of another; so of the irrigated portions of the farm and the woodlots. Such maps are of great utility to the cultivators of large farms, especially where they are fenced into numerous fields of unequal size and form, as is so frequently the case in most portions of New-England.

The original farm contained about 300 acres, lying upon a large swell of land of excellent quality, being mostly of a deep yellow loam soil, and very free from large rocks. Since the farm came into Mr. Sanborn's possession he has purchased two or three adjoining farms, of similar soil with the homestead, and they are equally favorably situated for irrigation from the same pond.

The Farm Buildings

Consist of a large first rate house, with suitable out-buildings, and two barns, one of which is 100 by 42 feet with 18 feet posts. The other 150 by 40 feet, with cellar or basement under each. The mow or bay (of 15 feet in width,) of the 150 feet barn goes to the bottom of the cellar some 8 or 9 feet below the barn floor. The whole length of the cellar next the bay, is fitted up with suitable racks, feeding boxes, &c., for his young cattle, which are kept in the basement during the winter months. There are also two large barns in his mowing lots for the convenience of storing hay, many tons of which he annually sells. In one of his barns he has a "platform balance" for weighing hay, cattle, &c. By occasionally weighing loads of hay as carted in from the fields, he is enabled to form a pretty accurate estimate of the quantity of hay cut upon the farm. By referring to his farm journal, he estimated his hay crop of the past season at 250 tons; most of which was cut with a mowing machine.

Farm Stock.

For several years past the cattle wintered average about 100; 4 horses and several colts on one of the out farms, 25 head of cattle, and 40 sheep. His cattle are mostly of the so called "native breed."

Some few miles from his residence he has a large range of "mountain pasturage," in which he pastures for others, many of which are driven up from near the seaboard. This year he pastured for hire 260 head of cattle, 35 colts, and 260 sheep. To avoid any dispute about the price of pasturage of particular ages and sizes of cattle, horses, &c., he has printed cards of prices. The following is a copy of "Prices for Pasturage for 1861:"

CATTLE.	
One year old, each,	$1.50
Two do. do.	2.25
Three do. do.	3.00
Six feet Oxen or Steers per pair,	7.00
Six and one-half feet Oxen per pair,	8.00
Seven feet Oxen per pair,	9.00
Cows, each,	3.50

The sizes reckoned as they come from pasture.

COLTS.	
One year old,	$3.00
Two do.	5.00
Three do.	6.00
Four do.	8.00

He has about 2,000 acres of out lands, much of them being of a mountainous character, but affording excellent pasturage. As wood and timber in that vicinity are of little value, he is having many acres annually cleared and brought into pasture.

Cultivated Crops.

This year had 13 acres in corn—oats, barley and potatoes to match. He had on hand about 1,500 bushels of corn, oats and barley, nearly all of which will be fed to his farm stock the coming winter. Having a grist mill on the premises, most of his grain for stock is ground. Beside the grist-mill, he has a saw-mill, clapboard and shingle mill, and planing machine, lathe machine, and two powerful threshers, all propelled by water-power, having 16 feet "head and fall" of water. That being a good farming section, a large amount of grain is raised, which is generally shooked in the fields, and when dry enough it is drawn directly from the fields to the machines. For threshing some farmers pay cash, others pay *toll*.

Through the summer season he employs an average of ten men, many of them having families, and occupying small houses upon the farm, of which he has several. None of his laborers board in his family.

Irrigating Meadows.

But the most interesting feature connected with Mr. Sanborn's farming, is his extensive and systematic course of irrigation—an agricultural improvement scarcely adopted by one in a thousand of our New-Hampshire farmers. As already said, Mr. S. has between five and six miles of main drains for carrying the water from a large pond over his grass lands. In locating his ditches, in the first place, he obtains the level from the pond the whole length of his intended ditches, several of which are over a mile in length. Then with a strong team and a large plow, he turns two, three, or four furrows, according to the size of the intended ditch. The furrows are thrown out on the lower side, raising an embankment so that the water in the largest ditches is two or three feet deep, and three or more feet wide. Every few rods small outlets are made in the embankments, to let off the water in such quantities as are needed. There are, also, numerous small ditches, cut out with the shovel or spade in form of the letter V; over these the mowing machine passes without obstruction. The grass on the banks of the large ditches is cut with the scythe. Recently he has much extended his ditches, and he will soon have 300 acres of mowing land irrigated, nearly the whole of which slopes sufficiently to keep the water in motion. Near the base of some of the slopes and in some of the hollows, probably the grasses would be better in quality if the lands were underdrained.

It is about twelve years since Mr. Sanborn commenced his system of irrigating his "old mowing fields," many of them previously yielding very scanty crops of grass, not over 10 or 15 cwt. of hay per acre; these same acres now, with the application of water alone, producing two tons of dried hay per acre, of first-rate quality for cattle, those fields having been the longest irrigated giving the largest quantity. Mr. S. says he has no doubt that the water that is now running to waste, and that might profitably be used upon the grass lands in the town of Gilmanton, would, if properly applied, add at least fifty per cent. annually to the hay crop of that town, and this too without the addition of farm-yard manure. Beside this, it renders the farmer who judiciously irrigates his grass lands, independent of rains in the months of May and June. A scarcity of rain in those two months, as was the case over large portions of New-England in 1860, causes a great deficiency in the hay crop. Pasture lands are benefitted by irrigation as well as mowing fields. Irrigated pasture land is a thing I have never yet seen. It is to be hoped that the praiseworthy and successful example of Mr. Sanborn in the formation of "water meadows," will not be lost upon his brother farmers in this farming section of the country. As far as I am able to learn, he is the only farmer in New-Hampshire that has gone very extensively into this matter of irrigating his grass lands.

In the Transactions of New-York Ag. Society, 1858, I find quite a detailed account of L. D. Clift's farm, and of his extensive system of irrigation, which then had been in operation some eight or nine years. Mr. Clift's farm is in the town of Carmel, Putnam Co., N. Y. The Report of the Committee who visited the farm in 1858, was written by the Junior Editor of the Co. GENT.—occupying five pages of the Transactions. Those farmers having a copy of the Transactions for 1858, will do well to give it a careful perusal, as well also Mr. C.'s account of his farm, the next article following the Committee's Report.

Last June J. Stanton Gould, Esq., visited Mr. Clift's farm, for the special purpose of witnessing the effects of irrigation upon the mowing fields of that farm. His report is published in the Co. GENT. of Aug. 22, 1861. Those having the Co. GENT. of above date, will, perhaps, do well to give it a careful perusal during some of the long evenings of this season of the year. I here make a short extract from Mr. Gould's report. He says:—"In the course of my journey from my own residence to Mr. Clift's, I estimated roughly the land susceptible of benefit by irrigation, which passed under my eye, at 20,000 acres; assuming, as before, that the increase was only one ton to the acre, and its value to be $10 per ton, we should receive from our now wasted waters a revenue of $200,000 annually. I fully believe that without resorting to any extensive or costly engineering operations, or any erections more complicated than any good farmer is capable of executing with his ordinary help, it will be possible to increase the annual value of the grass lands of the State of New-York one million of dollars, by the judicious use of the streams flowing through them."

There are tens of thousands of acres of land in New-Hampshire that might be cheaply irrigated, and be made to produce annually from one and a half to two tons of the best quality of stock hay, that now are scarcely worth mowing. This was the case with field after field on Mr. Sanborn's farm. And what he has done, other farmers can do, if they will take hold of the matter in the right way, and persevere as he has done.

It is doubtless true, that "it requires considerable skill and practice, and many failures have followed experiments of this kind, made without due care and attention." The farmer that undertakes to irrigate his fields, should fully understand the different effect between flowing and stagnant water—"for while flowing water coaxes up the finest indigenous grasses of the climate, and renders them sweet, and wholesome, and nutritious, and luxuriant, stagnant water starves, deteriorates or kills all the good grasses."

From Mr. Clift's experience, and that of some others, *winter irrigation* is quite as necessary as that of summer, with this difference—the water may flow over the land without interruption from November till April.

Warner, N. H., Nov. 22, 1861. LEVI BARTLETT.

SUCCESSFUL FARMER'S CLUB.—Extract from a letter dated Lebanon, Conn., Nov. 11. "We have had a Farmer's Club in this town for a few years past that has met at the dwelling houses of those that attended it, during the winter season, and we became so much interested in our meetings that within the past year we have organized a club with a constitution and by-laws, a copy of which I shall mail to your address for perusal. We have purchased some books for a library, and are about making up clubs for agricultural papers. Just now I happen to be destitute of an agricultural paper, which I *cannot afford to be very long.* Our club now numbers forty members. W. C. N.

[For the Country Gentleman and Cultivator.]

The Country Gentleman and Cultivator.

[We publish the following letter from an old subscriber with the greater pleasure, as we have to acknowledge our indebtedness to him, not only for his own subscription since the establishment of THE CULTIVATOR—a period of now nearly Thirty Years—but also for efforts annually renewed to maintain and extend its circulation among his neighbors. Few of our Club-Agents began earlier, or have yearly met with more constant and gratifying success in this respect. EDS.]

I take some pains to secure the reading of THE CULTIVATOR by my neighbors, as the best means of promoting the interest of agriculture among us, and not from any expectation of a premium. It is from a high estimate of the value of the paper to every farmer who reads it.

The doctrines of the paper are *sound*—free alike from false interpretations of science, and from obstinate fogyism—progressive, but eminently experimental.

The paper has a large number of able contributors, who give us the conclusions of their large views, their careful study, and their long experience. The young farmer is incited to a love for his calling, and to a desire to excel in it by the inspiring influence of those noble men who show such zeal in their profession.

The literary character of the paper is elevated. The writers do not think it necessary to come down and address farmers in a low and inelegant style, and I am happy to say that we need not fear that the literary taste of our sons will be degraded by reading the COUNTRY GENTLEMAN and CULTIVATOR. I am proud to say that in honest dignity it stands beside our best quarterlies.

It is a good deal to say of an agricultural paper that it has sustained its character, and even improved for so many years. The last volume of THE CULTIVATOR is fully equal in value and interest to any one of its predecessors. I presume the conductors understand what has been required for this, better than their readers. How many scientific and literary journals fail or decline after a few years. But agriculture is progressive, and the field is wide, so that it has been possible, as we see, to present something fresh and instructive, and interesting, every month for a generation.

I do not need, I presume, to offer an apology for what I have written. It is not improper that the editors should know how their labors in conducting their journal are appreciated by their readers, and I suppose I represent a large number of them.

I take it for granted that your paper comest into competition with others of a different character, some of which, though superficial, are rather taking with a class of readers.

Those articles in THE CULTIVATOR of this year which interested me particularly were those on English agriculture by L. H. T., and the Farming in Chester county. The contributions of the same kind by Mr. THOMAS, and by Mr. TODD, are also valuable. I think much also of Mr. BARTLETT'S papers, &c., &c.

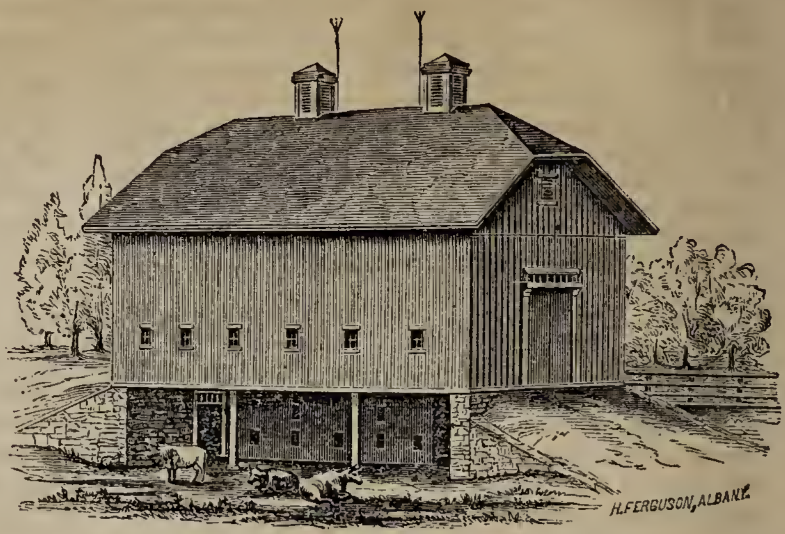
I might add that if long acquaintance gives any right to speak for THE CULTIVATOR, I have that, for I have been a reader of every number. I remember with what pleasure I hailed the announcement of Judge BUEL, that he was about to send forth such a paper, just as I was about to take into my own hands the conduct of a farm. So that THE CULTIVATOR is identified with the whole of my farming. NEWTON REED. *Duchess Co., Nov. 30.*

SPONTANEOUS COMBUSTION.—I was greatly surprised at a statement in the American Agriculturist a few months since, from the editor, that he did not believe in the spontaneous combustion of hay stacks, showing how rare is the occurrence in America, but it frequently takes place in England, a moister climate, and where the stacks are large. Spontaneous combustion in the human body is very rare, yet it does occasionally take place in excessive hard drinkers of alcoholic liquids. A. FRANCIS, M. D.

Rural Architecture.

Barn for Seventy-five to a Hundred Acres.

This barn stands on a slight declivity, and is so constructed that a wagon may be driven through it, obviating the necessity of backing out. Its size is forty-two by sixty feet. (Its capacity may be increased to any extent by greater length.) The main floor is lighted by a long horizontal window over each double door; the trap-door for straw turns down, and buttons up under the girth; if desired two more may be placed outside the ventilators. A smooth planed shoot below allows the straw to slide freely in the root and straw cellar below, and a cart load of roots is dumped down this shoot. Roots will keep finely if a foot of straw is first thrown down, then several feet of roots, then a few additional feet of straw or chaff to protect them from freezing.


H. FERGUSON, ALBANY.

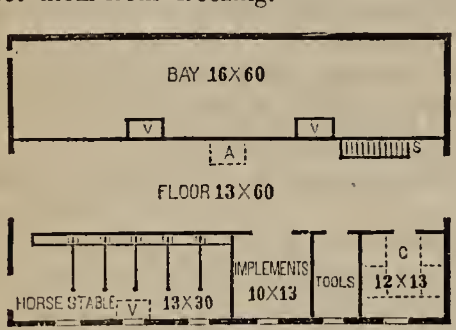


Fig. 2.—Principal Floor.—A. Trap Door and shoot for straw and chaff.—G. Granary.—V. V. Ventilators and hay shoots.—S. Stairs to basement.

There are two ventilators at the side of the bay, through which hay is thrown down into the feeding passage below; the mode of constructing these shafts is already described. A third is placed over the passage in the horse stable, for the purpose of ventilation only. They are made to unite at the ridge of the barn by extending them up next to the roof, as shown by a section in fig. 3. This bay contains 960 square feet, and will hold about forty tons of hay, or two tons for every foot of rise, when the hay is well settled; and if one of the ventilator shafts is marked in feet outside, the owner may see at any time nearly how much he has on hand. A fixed ladder for ascending it may be placed near A.

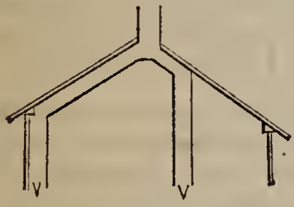


Fig. 3.

The Horse Stable is 13 by 30 feet, and contains five single stalls, each four and a half feet wide, and one double stall seven feet wide, for a team to feed when in harness, and readily accessible through the wide stable door. One or two small trap doors allow the attendant to cast the cleanings through to the manure shed below; and a cast-iron drainage plate, slightly concave, set with holes, allows all the liquid to fall on the manure heap, which, if necessary, should have an amount of absorbents, such as straw, sawdust or coal ashes, sufficient to prevent waste. This stable is well lighted with three small glass windows.

Next adjoining this stable is a room, 10 by 13, for holding all coarse tools or implements connected with the farm; and next to this is a smaller room for the smaller tools, which need not occupy but one side, while the other may have a work bench and vice.

The Granary is 12 by 13 feet, and contains five bins, which will hold over 600 bushels. The rear and larger bin may contain mixed grain for cattle and horse feed, and be discharged through a tube into a wagon below. The smaller ones may have the bottoms raised eight inches above the floor, with an opening and slide in front of each, and a recess beneath, so that a half bushel may be placed under the opening and filled in a moment, with little labor. The granary being on the corner of the barn, with the barn floor on one side and the tool room on the other, is less liable to be entered by rats, than if surrounded by concealed passages.

All the space over the granary, tool rooms and horse stables, may be filled with unthrashed grain, besides the poles or platforms extending across the ends of the space over the floor.

A slate and pencil should always hang in the granary, to keep reckonings, register orders, &c.

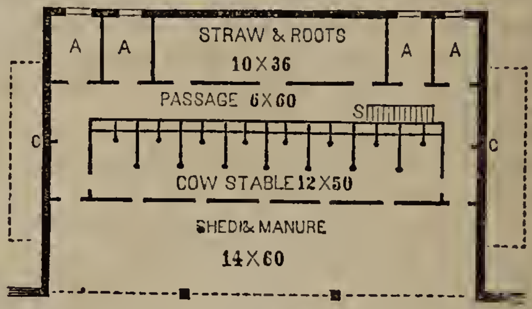


Fig. 4. Basement.—A. A. A. A. Boxes or pens for calves and cows with calf, 6 by 10 feet each.—C. C. Cisterns under the wagon-way or abutments, from which water for cattle may be drawn through a cock.

The plan of the basement nearly explains itself. The mode of filling the root room has been already described. There are a number of sliding board windows in the rear of the cow stalls, for throwing out manure, and over a part of them glass windows for admitting light. It will be observed how accessible the roots, straw and hay are in front; and that the manure in the rear is easily drawn off by a cart, without the necessity of resorting to the wheelbarrow, except it be in cleaning the cow and calf pens.

There are over 3,000 square feet of surface on the roof, and about 2,000 barrels of water fall annually upon it, in the form of rain, affording five or six barrels daily for watering cattle, if watered by it all the year round. The cisterns should, therefore, hold not less than 500 barrels. (This size will not be needed, if there are other supplies of water—or if the herd is not large enough to consume so much.) If these are each twenty-five feet long and six feet wide, they will hold this amount. They should be well built, of masonry and water-lime, and arched over the top like a stone culvert, so that there will be no danger of the embankment falling in. A good well in the middle of the passage, with a pump, would obviate the necessity of these cisterns.

The cost of this barn, built with rough boards, would be about $800 or $900; planed and painted, $1,100 to $1,200.

The Horticultural Department
A. J. Downing

WARD CASES

Those who have attempted to cultivate green-house plants in rooms, have met with two serious drawbacks. One is the liability to become coated with dust, and the other is the dryness of the air, which is greatly increased by stove heat. For these reasons there are but few plants that will endure for a long time in common living rooms. To obviate these difficulties, the Ward Case has been constructed. It consists essentially in covering the plants with glass. This protects them from dust, and by confining the moisture which is constantly exhaled by the leaves, gives them a humid atmosphere. It also assists materially in equallizing the temperature, and shielding from the effects of the sudden changes which may occur in the room. For these reasons, the care of the plants in these cases, is much diminished.

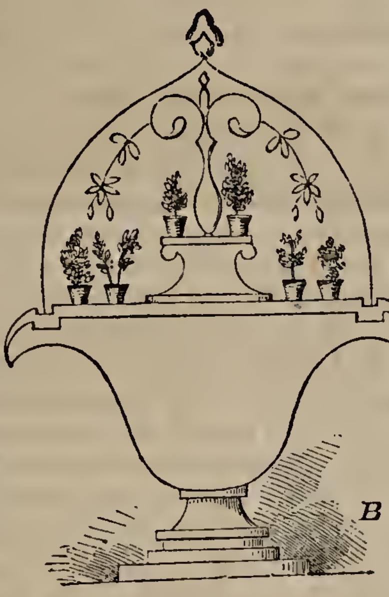


Fig. 1.

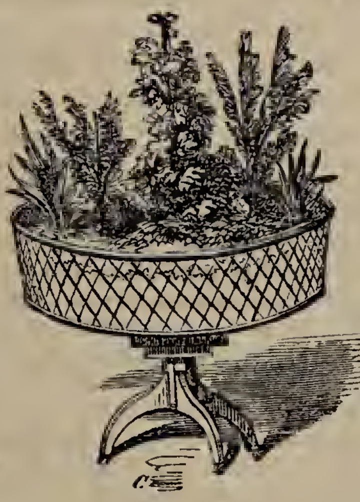


Fig. 2.

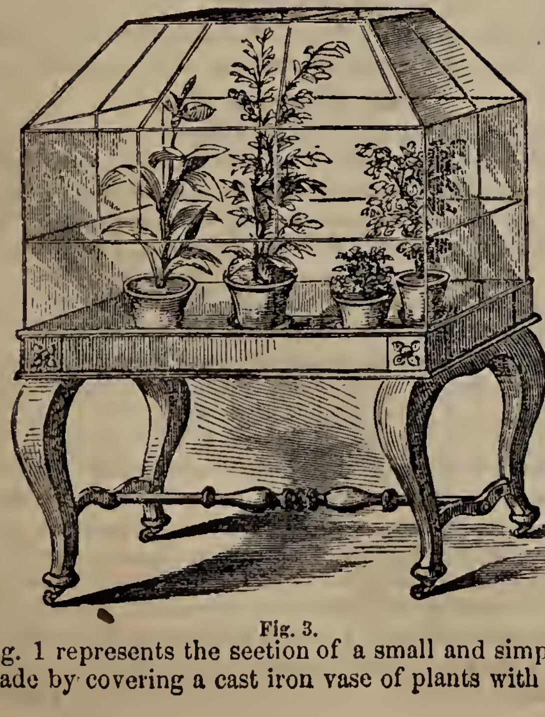


Fig. 3.

Fig. 1 represents the section of a small and simple case—made by covering a cast iron vase of plants with a large bell glass. Fig. 2 is a cast-iron basket of plants, without the glass cover. Fig. 3 is the common Ward Case attached to a table made about three feet long and two feet wide. The glass is nearly two feet high besides the pyramidal cap.

A simpler and cheaper form of construction is shown in Fig. 4, which is made of wood and covered with window sash. If well constructed and neatly kept, it will have a very ornamental appearance. When kept in a room subject to occasional cold below freezing, the proper temperature may be maintained by the following contrivance. Let the pots stand on an iron or copper tray, (the pots being supported, if heavy, by iron bars,) beneath which is soldered a convex round piece of sheet copper, so as to form a flat boiler beneath the tray. A tube through the tray above admits filling the boiler and allows the escape of the steam; a small tube and cock below allows the water to be drawn off. A lamp placed under the boiler heats the water, and keeps the plants sufficiently warm.

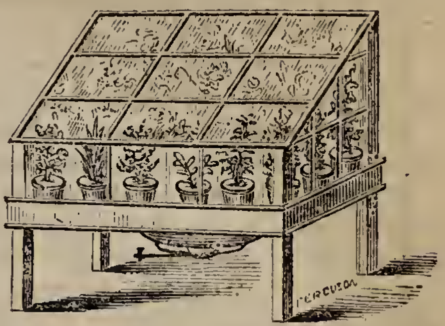


Fig. 4.

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ROME BEAUTY APPLE.

This Ohio variety, as many of our readers know, is remarkable for its fair and handsome appearance, while it has but moderate flavor. It has already become famous for market in many places. W. W. Rathbone, of Marietta, states in the Ohio Farmer, that its fault, if there be one, is "its constant overbearing"—that it "bears itself to death"—that trees often produce fruit the third year from grafting on yearling seedlings;—and that now, "after bearing monstrous crops almost annually, men are unreasonable enough to complain that the fruit is not so large as formerly, and that the trees do not grow so thriftily, without having a particle of extra feed." He says that Maj. Putnam merely plowed his Rome Beauty orchard, and that they have uniformly presented an exceedingly thrifty appearance. No tree, he asserts, makes so thrifty, handsome upright growth. As a consequence of their great productiveness, the main limbs become covered with pendant twigs, with protuberances at their extremities. A portion of these should be cut away in order to thin the crop. This variety sold last year in the New Orleans market for $5.50 per barrel, when Roxbury Rsusets would bring but $3.00.

* * *

[For the Country Gentleman and Cultivator.]

To Keep Rabbits from Trees in Winter.

Two years ago I found the rabbits gnawing my choice trees severely. I had seen several remedies recommended, such as tying on strips of lath, bark, wrapping with straw, &c. But I thought some kind of a *wash* would be much cheaper, and less work to put it on. I took a small quantity of *tobacco* and made a strong tea of it; then a thick *lime white wash*, and stirred in the tobacco. With a brush or swab, a man can wash 1,000 in a day. It proved a remedy with me. My rabbits, although uncivilized, are too nice to chew tobacco. If storms wash off the mixture, wash them again. It does not cost much. Answer to J. T. Cook of Md. S. Fotser.

* * *

A Productive Apple.—Among all autumn varieties, there is probably nothing equal in productiveness to the *Hawthornden*. It is a fair fruit, and on account of its fine culinary qualities, is one of the most profitable trees for planting on limited grounds, for family supplies.

RULES FOR TREE PLANTERS.

The following rules are so self-evident to men of experience, that they seem almost like axioms; and yet they are continually broken by novices in setting out orchard and fruit gardens:

1. If the roots of a tree are frozen out of the ground, and thawed again in contact with air, the tree is killed.

2. If the frozen roots are well buried, filling all cavities before thawing any at all, the tree is uninjured.

3. Manure should never be placed in contact with the roots of a tree, in setting it out, but old finely pulverized earthy compost answers well.

4. Trees should always be set about as deep as they stood before digging up.

5. A small or moderate sized tree at the time of transplanting will usually be a large bearing tree, sooner than a larger tree set out at the same time, and which is checked necessarily in growth by removal.

6. Constant, clean, and mellow cultivation is absolutely necessary at all times for the successful growth of the peach tree, at any age; it is as necessary for a young plum tree, but not quite so much so for an old one; it is nearly as essential for a young apple tree, but much less so for and old orchard; and still less necessary for a middle aged cherry tree.

7. To guard against mice in winter with perfect success, make a small, compact, smooth earth mound nearly a foot high, around the stem of each young orchard tree.

8. Warm valleys, with a rich soil, are more liable to cause destruction to trees or their crops by cold, than moderate hills of more exposure, and with less fertile soil—the cold air settling at the bottom of valleys during the sharpest frosts, and the rich soil making the trees grow too late in autumn, without ripening and hardening their wood.

9. The roots of a tree extend nearly as far on each side as the height of the tree; and hence to dig it up by cutting a circle with the spade half a foot in diameter, cuts off more than nine-tenths of the roots; and to spade a little circle about a young tree not one quarter as far as the roots extend, and call it "cultivation," is like Falstaff's men claiming spurs and shirt collar for a complete suit.

10. Watering a tree in dry weather affords but temporary relief, and often does more harm than good by crusting the surface. Keeping the surface constantly mellow is much more valuable and important—or if this cannot be done, mulch well. If watering is ever done from necessity, remove the top earth, pour in the water, and then replace the earth—then mulch, or keep the surface very mellow.

11. Shrivelled trees may be made plump before planting, by covering tops and all with earth for several days.

12. Watering trees before they expand their leaves, should not be done by pouring water at the roots, but by keeping the *bark* of the stem and branches frequently or constantly moist. Trees in leaf and in rapid growth, may be watered at the roots, if done properly.

13. Young trees may be manured to great advantage by spreading manure over the roots as far as they extend, or over a circle whose radius is equal to the height of the tree, in autumn or early winter, and spading this manure in, in spring.

14. Never set young trees in a grass field, or among wheat, or other sowed grain. Clover is still worse, as the roots go deep, and rob the tree roots. The whole surface should be clean and mellow; or if any crops are suffered, they should be potatoes, carrots, turnips, or other low hoed crops.

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[For the Country Gentleman and Cultivator.]

Spanish Chestnut---French Chestnut---Castanea vesca.

Eds. Co. Gent.—I noticed in your last paper an article from Mr. Wynkoop of Catskill, under this heading, intimating as something new, that he had succeeded in growing this fruit. He also says his tree is "a graft from a Spanish tree on the native stock, which he thinks has in a measure acclimated the fruit." It is now 60 years since, in my childish rambles across the grounds between my father's house and that of my grandfather, I used to follow a path within sixty feet of which stood two lofty and wide spread Spanish chestnuts, rising to the height of over 40 feet, and each covering a circle with their lowest branches of fully 30 feet or more in diameter. These were then in full bearing, and long remained so, until in the formation of new streets my father had them felled. Franklin street, in Flushing, now covers their site. The Father of the Hon. J. W. Lawrence of this place, obtained some trees from my grandfather, Wm. Prince, one of which is still standing, and produces great crops. My father, Wm. Prince, urged specially upon our countrymen the culture of this tree on an extensive scale, either by planting the seedling trees, or by grafting it on our other native species, which can be done as readily as grafting an apple. During his life, and up to this time, there have never been less than 500 to 1,500 of this tree on hand in our nurseries, and they have been widely, but very sparsely disseminated. They have many varieties in France, and in the third edition of the London Horticultural Society's Catalogue, published in 1842, there are 20 varieties enumerated. These distinct varieties can only be perpetuated by grafting, and of the Devonshire there named I received some grafts from the Secretary of that Society about 20 years ago, and we have been of late years eating the fruit from the only grafted tree of this kind that ever grew in America. Being an English variety it is more hardy than either the Spanish or French.

When it is considered that these trees are so superabundant in their crops of fruit that the vast quantities grown in middle and southern France and in Spain constitute a large proportion of the food of the poorer classes during a portion of the year, and that it is the cheapest of all diet in these countries, it will be perceived how important is the general culture of so estimable a fruit among us, and how wrongly its culture has been neglected.

The Madeira Nut.

While discussing this subject I recall to mind another most important tree, whose general culture has been even more neglected—Juglans regia, usually called Madeira nut, or English walnut, neither of the two latter names being at all applicable, as the tree is a native of Persia, the native land of the Peach, Nectarine, Apricot, and of the Vitis vinifera, the parent of all the foreign grapes. It is now just 54 years since I accompanied my father to the residence of Mr. Halleck, at Great Neck, on this Island, a most staid Quaker gentleman, the grandfather of Major-General Halleck, who has just been appointed Commander-in-Chief of the northwestern army, who, however, hails from Oneida county, his present homestead. Near his house stood a Madeira nut tree, from which he then received an annual revenue of $40, the green nuts selling at $1 per hundred for pickles. My father had also a lofty and very ancient tree, much older than himself, from which he sold the green nuts at the same price, and Judge E. W. Lawrence has now a tree in his garden here, the crop of green fruit from which sells annually for $35 to $45.

Flushing, Nov. 30, 1861. WM. R. PRINCE.

HORSE-CULTURE OF GARDENS.

MESSRS. EDITORS—By giving an article in THE CULTIVATOR, upon kitchen garden culture by horse-power, suitable for the farmer or market gardener, you would oblige your humble servant and other subscribers. A. F.

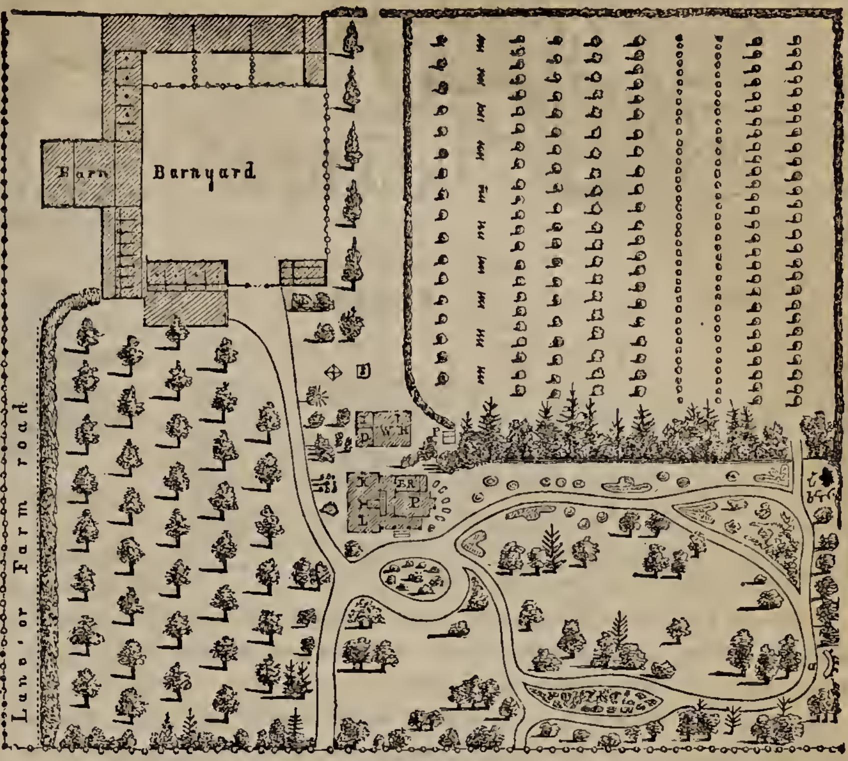

Fig. 1.

The garden should have an unoccupied strip of land at each end, ten or twelve feet wide, for the horse to turn upon. The rows of vegetables should extend in drills across the garden, so that the horse may pass from one end to the other without interruption. Potatoes, beets, parsnips, carrots, peas, asparagus, cabbage, tomatoes, strawberries, raspberries, and all the larger plants or vegetables which require some space, may be thus planted in drills and cultivated by horse-power with common plows or cultivators, if the drills are two to four feet apart, according to the size and nature of the plant. The smaller may be in double drills. With an implement like Garrett's horse-hoe, (figured and described on p. 145 of Thomas' Farm Implements,) which dresses out with great accuracy several rows not over a foot asunder, at one passing, nearly all the smaller vegetables might be thus treated without difficulty. Probably one of Alden's thill cultivators, which may be guided with accuracy, might be fitted so as to dress at least three drills at once, by leaving vacancies between the teeth for the rows. Where one horse is used, it is necessary to dress either one, three, five or more rows, in order that the horse may walk in the middle.

The accompanying figure, (fig. 1) represents a country place with the house nearly at the center, a pear orchard on the left, ornamental grounds on the right, and back of the latter a garden laid out with an express view to horse culture, the rows which extend across being currants, gooseberries, dwarf apples and dwarf pears. The latter may be omitted, or if planted should be either a rod or more apart, so as to allow vegetables to grow between, or else eight or ten feet apart with no vegetables.

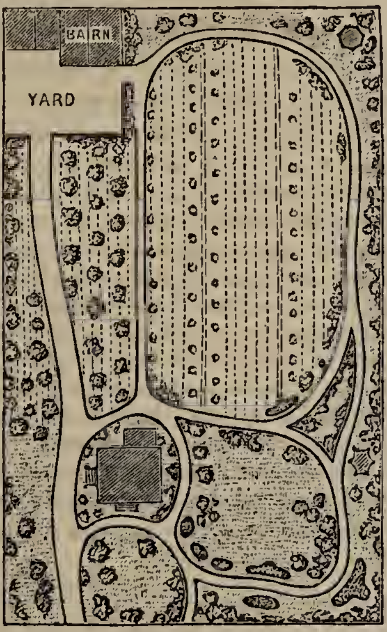

Fig. 2.

On a smaller scale, or for a village garden, the same end may be attained with a more finished and picturesque arrangement as shown in the second plan, a sufficient space being left at each end unplanted, so that with the walk added, the horse may turn about without treading on the vegetables.

For field culture, intended for extensive marketing, the same course is to be pursued in every respect, but the importance in this case of cultivators that shall take several rows at once is very obvious.

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If you do good, forget it; if evil, remember & repent of it.

[For the Country Gentleman and Cultivator.]

THE NORTHERN SPY.

This apple was planted quite extensively in Wisconsin a few years ago. Its habit as a tardy bearer not being understood by planters, after waiting, as they thought, a suitable length of time for a show of fruit, began to denounce it as unsuited to the climate. It was not strange that doubts were felt concerning this, when so many of the old popular eastern sorts had disappointed western culturists. Many trees, however, are now fruiting, bearing moderately at six to eight, and profusely at eleven years from planting. We should give the Northern Spy a place a place even in quite a small list of sorts for general cultivation in the northwest.

The trees of the Northern Spy in my orchard this fall, before I left Wisconsin, were perfectly beautiful, and were greatly admired. I have several barrels of the fruit in my cellar here as fresh and hard as when gathered. The tree is quite hardy, and makes a fine growth in our western soil.

Here in Ohio it is planted a good deal. In the northern part of the State it does finely. About Columbus, and further south, it scarcely can be reckoned among the long keepers, ripening, as it does, in early winter.

Columbus, Ohio, Nov. 20, 1861. A. G. HANFORD.

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[For the Country Gentleman and Cultivator.]

THE OLIVE TREE--Olea Europea.

In your last number I notice some comments, descriptive of this tree. It is so hardy that it will withstand the winters of North Carolina, and there are some quite extensive plantations of it in the Southern States. The product, however, even in Italy, is not such as to render its culture very profitable, and there is more "olive oil," so called, obtained from one of the hog pens of the west than an extensive plantation would produce. By far the greater portion of the "olive oil" imported is made from lard exported from this country to France, the two voyages imparting to it a decided improvement. W. R. PRINCE.

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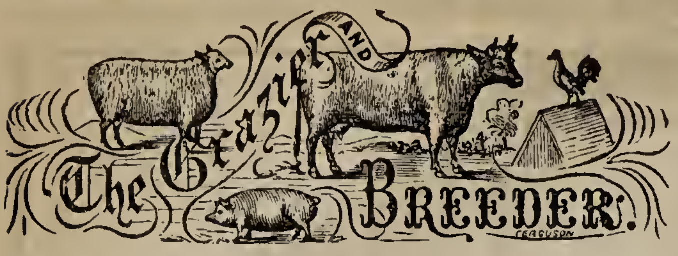
☞ THE FRUIT-GROWER'S SOCIETY of Western New-York, will hold its next annual meeting at Rochester, on Wednesday, Jan. 8, 1862, at 11 A. M. By order of the Council. C. P. BISSELL, *Sec'y.*



[For the Country Gentleman and Cultivator.]

BEST SHEEP FOR FEEDING.

I find your "Inquiries and Answers" one of the most valuable parts of your paper, and would ask—1. Which is the most profitable breed of sheep to buy to feed for mutton?—2. Is a Leicester or South-Down worth more by the pound, LIVE WEIGHT, as a stock for feeding, than a Merino, all being in similar condition?—3. When, and in what manner, shall I commence feeding a flock of Merinos, intending them for sale in March or April?—4. What kinds and quantity of grain (and roots, if any,) should be given at the time of highest feeding?—5. What is the value of oil-cake as compared with corn—or in other words, when corn is worth 30 cents per bushel, as it is here now, what should be paid for cake? You published last spring a communication from S. Edwards Todd, Esq., giving his mode of fattening cattle, but I have seen no such detailed statement as to sheep. "G." Oakland Co., Mich.—COUNTRY GENTLEMAN, Nov. 14.

MESSRS. EDITORS—Not having seen an answer to the above inquiries, I will briefly give the following as the result of my experience and observation:

Answer to question No. 1. Cotswolds, or crosses partaking largely of that blood, that can be made to weigh readily from 180 to 200 pounds and upwards.—2. Leicester or South-Down preferred; Leicester the largest and best, standing next to the Cotswolds in my estimation for feeding.—3 and 4. Never had any experience in feeding Merinos; but to feed common sheep, or any of the long-wooled breeds that I intended for the March or April market, I should give plenty of good hay and all the roots they would eat, with very little corn, until 1st or middle of January, when I should increase the corn gradually till they had all they would eat up clean at every feeding, and continue it until marketed; which to be profitable, (and that is what feeders aim at,) should generally be in thirty or forty days after the highest point in feeding is arrived at. Good feeders take on flesh rapidly, and unlike cattle, reach nearly their greatest weight very quickly; after which you do not get well paid for your feed, except perchance in the rise of the market.

Turnips are the only kind of roots I feed. They can be raised much cheaper, and appear better adapted to sheep than any thing else. I raise chiefly the English Globe variety, being larger and more easily raised and gathered than any other variety—five men and two teams gathered 50 wagon loads for me in one day this season. They have very large tops as well as bottoms, and grow mostly out of the ground, and can be removed readily with a gentle push of the foot. The tops furnish valuable food for stock. The size of these turnips may appear large to New-Yorkers and New-Englanders; but my whole crop of this variety was estimated by many to weigh from three to five lbs., and many of them were on exhibition at the clerk's office for a long time, weighing 20 pounds and upwards each. Seed sown on sod ground without manure, broadcast, from 10th to 15th of July. So much for roots.

In answer to the last inquiry, I would say that I have fed more or less oil-meal every year for many seasons. It usually costs, delivered here, about $28 per ton. I feed very little, when corn is cheap; never to sheep for fattening purposes when it is below 35 cents, as at present, or to cattle when below 40. Sheep do their own grinding, hence no toll comes out of *their* corn.

Near Fort Wayne, Ind. I. D. G. NELSON.

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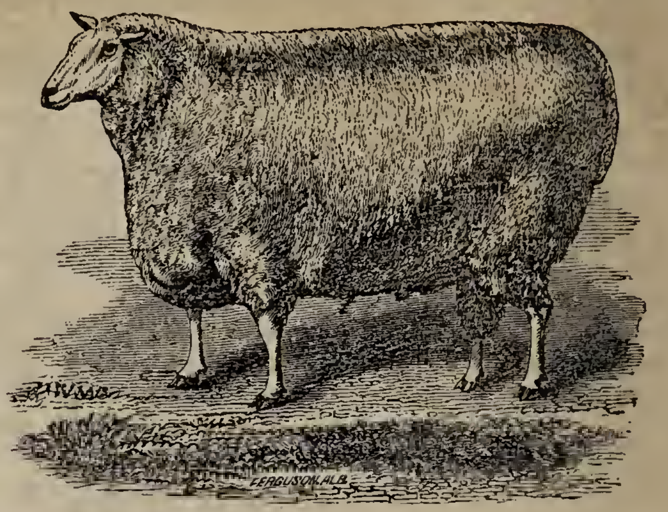
CURE FOR HOG CHOLERA.—A correspondent of a Western paper states that the following has been used in Kentucky with success:—One part madder, one part sulphur, one-half part saltpetre, and one-half part black antimony, mixed, and give one tablespoonful twice a day. As a preventive, give one tablespoonful a day.



THE SHEEP OF LINCOLNSHIRE.

We have had engraved for this week's COUNTRY GENTLEMAN the portrait of an Improved Lincolnshire Sheep. The animal in question was bred by Mr. John Clarke of Long Sutton, an English agriculturist of much prominence, and was one of three to which the Royal Society's first prize was awarded. The engraving of the group, on steel, appeared in a recent volume of the London Farmer's Magazine; and the one of them, which we have selected as the subject of our illustration, stands in a position to show the characteristics of the sheep to pretty good advantage. There has been some inquiry for the breed of late years in this country, and where tried in Canada it has we believe succeeded very well.

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[For the Country Gentleman and Cultivator.]

STEAMING FOOD FOR CATTLE.

The subject of steaming food for stock seems to be engrossing the attention of farmers in many parts of the country, especially in those places where hay commands a high price; and the results of those experiments which have been tried in a thorough and systematic manner, would seem to prove that in point of profit, it was preferable to the ordinary modes of keeping; more especially is this the case in keeping milch cows. During the past fall I had the pleasure of forming the acquaintance of Mr. H. H. PETERS of Southboro', Mass. This gentleman is largely engaged in producing milk for the Boston market, his herd of cattle consisting of about 60 thorough-bred Ayrshires, which is said to be the largest and finest herd of this breed of cattle in the United States. For two winters past, Mr. Peters has been experimenting in the different ways of keeping his stock through the winter, such as cutting, mixing and steaming the food for them. His apparatus for steaming food for stock is thus described in the Boston Cultivator:

"It consists of an upright boiler, such as is commonly used for working the ordinary elevating engines used on board ships and in stores. It is placed in one corner of the barn-cellar, and surrounded by fire-proof walls. The smoke-flue connects with a chimney on the outside, which is carried above the roofs of the nearest buildings. The fuel used is hard coal. There are two steam-vats, standing in two barns, which join at one corner, and form a right angle. The vats are on the floors where the cattle stand. Iron pipes carry the steam from the boiler to the vats. Besides these, gutta percha pipes are used to take the steam to the casks or tubs in which vegetables, oats, &c., are cooked. These pipes can also be put into the water, which is constantly running in and out reservoirs in the barns, and can be made to warm it to any degree that may be desired to make it agreeable or beneficial to the stock. The whole cost of the apparatus was $300. About 400 pounds of fodder is usually steamed in each vat at one time, and the vats are filled once a day, the time of steaming being three hours. The two vats are filled with different substances. One, from which the working oxen and several steers, heifers and dry cows are fed, is filled with cornstalks—the corn having been cut at the ground and shocked soon after it was *glazed*—and wheat chaff, barley chaff or beards, or oat straw, in about equal proportions, the cornstalks and straw having been passed through a horse-power cutter. The fodder is dampened in the vat, and wheat shorts mixed with it at the rate of 2 quarts to each animal to be fed. The cows in milk are fed from the other vat, which is filled with good hay that has been run through a cutter, and the same quantity of shorts for a cow as mentioned for the other stock. When the vats are thus filled, the steam is let on. The steaming is done in the fore part of the day, and the cooked fodder is taken into large troughs which are placed on wheels, and are run along the floorway in front of the cows as they are fed. The fodder is left in the troughs several hours, to cool, but it retains sufficient heat, even the coldest weather, to make it warm enough to be eaten by cattle. The cattle which have been fed wholly on corn fodder, straw and chaff, with the quantity of shorts mentioned, are in good order, although the oxen have been worked all the time. All the fodder is eaten; we could not see that the amount of a handful of corn-stalks was left among the fifteen head fed in this way. The prepared food appears to be very palatable; it has an agreeable odor, resembling newly baked Yankee brown bread, and the stock eat it readily. The milch cows are also in good order as could be expected, considering the length of time they have been in milk and the large quantity they give.

"The average cost of the food for all the cattle—about fifty head, exclusive of the calves of last season—is fifteen cents per head a day."

It it is the opinion of Mr. Peters that there is considerable saving in rough fodder, such as corn-stalks, straw, chaff, &c., cooked in this way; at least cattle will eat much more of it, and do better in the meanwhile, than when fed in the ordinary way.

Mr. Peters estimates the cutting of the feed, cooking it, and serving it out to the cattle, to amount to about two cents a head per day, which, added to the cost of feed, would amount to seventeen cents a head per day for the fifty animals. From the consideration of the various experiments made and published on the subject of steaming food for cattle, it will be seen that the cost of keeping will depend in a measure on the cost of the apparatus used, the value of the materials used for feed, and the kind of cattle kept. The profits of this method of steaming over the ordinary way of feeding, must depend mainly on the cash value of the raw material fed.

Wilmington, Vt., Dec., 1861. C. T. ALVORD.

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[For the Country Gentleman and Cultivator.]

Feeding Corn and Corn Cobs to Horses.

Editors of the Country Gent.—May I ask Curious, who in No. 22 gives special permission, if it would not be better to let the horse eat the corn from the cob without "cutting it into pieces about an inch long?" In the west, we throw the ears of corn into the feed box, and the horse eats off the corn and leaves the cob. If, in the smaller ears of the east and north, the horse cannot as easily manage to shell it, why not shell it for him, instead of obliging him to consume the cob, which, when dry, has no nourishment, and for which he has no relish? If, as Curious says, "the grain that goes through undigested, operates as a *mechanical irritant* to the stomach and intestines, and is liable to produce inflammation," how much more so will the hard, rough indigestible cob tend to produce this result? It is to this point I would call the attention of all having anything to do with the noble animal aforesaid, and enter my protest against forcing him to eat dry corn cobs under any circumstances whatever. If clear shelled corn is considered too heavy feed, it can be mixed with lighter substances, as bran, shorts, &c., which are neither wholly innutritious or obnoxious to his taste. There is no question that much injury has been done to the stomach and intestines of horses, and many lives destroyed, by forcing them to eat the cob. In conversation with one of the Shakers of North Union, O., I was informed that they had formerly fed their horses with corn ground with the cob, but had become satisfied that the cob was very injurious, and that the loss of several of their finest horses was attributed to the eating of it. This Society pride themselves in having good horses and stock, and are close observers of the effect of the food given them. The stomach of the ox or cow, say they, will bear being fed with ground corn with the cob, but that of the horse will not. R. Fry. *Cleveland, O.*

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EXPERIMENT IN FEEDING HOGS.

If I pay 30 cents per bushel for corn to feed hogs, how much must I sell my hogs per pound to make it pay? How much corn will make one pound of pork, and how much time will it take to make it?

Mr. Editor—My corn crop having been very materially shortened by the drouth last summer, and having some good Leicestershire hogs on hand, I determined to make an experiment which should enable me to answer the above questions. On the 5th of October I bought from Messrs. Phelps & Andrews, produce merchants of this town, 100 bushels of old corn, for which I paid $30. On the same day weighed 9 hogs on the scales at the railroad depot. They weighed 1,820 pounds, average 202 pounds each. The same hogs in three separate lots weighed as as follows, viz., 4 barrows 12½ months old,885 lbs., average, 221; 3 sows, same litter, 615 lbs., average 205; 2 pigs, 7½ months old, 320 lbs., average 160. Ao the corn was old and the hogs were young, I soaked the corn 48 hours in cold water; fed in troughs on a floor under cover; the hogs ran out in a small yard to the ground. I fed them nothing but the corn and cold water, except three quarts of wood ashes mixed with one quart of salt, each week. The 9 hogs ate the first 25 bushels in 15 days, the second 25 in 17 days, the third 25 in 15 days, and the fourth 25 in 16 days, the 100 bushels in 63 days. They were weighed again on the same scales; 2,950, average 328 pounds each; deduct 1,820 pounds, gained 1,130 pounds; average gain on each hog, 125 pounds—gain each day, 18 lbs., or 2 lbs. on each hog per day. Same weighed in separate lots as before. Four barrows 1,470; deduct 885 pounds, first weight—gain 585 pounds; gain on each hog in 63 days, 146 pounds, or 2.3 pounds to each hog per day. Three sows, 945 pounds; deduct 615 pounds, 340 pounds gain; gain on each hog, 113 pounds, or 1.8 pounds on each hog per day. Two pigs, 525 lbs., less 320 pounds, gain 205 pounds, on each hog 102 pounds, or 1.7 pounds on each hog per day.

From the above it will be seen that the barrows gained some ¾ of a pound per day more than the pigs, but as they were all fed from the same barrel, I cannot determine whether they ate in the same ratio or not. They ate 100 bushels in 63 days, say 90 pounds per day, 10 pounds per day to each hog, and gained 2 pounds per day each—which enables me to answer the second and third questions, that it takes five pounds of corn to make one pound of pork, and 12 hours to do it. Five pounds of corn at 30 cts. per bushel, will cost 2.7 cts., or about 2¾ cts. as the cost of the corn to make one pound of pork, and if I add one-fourth of a cent for the trouble of buying the corn and feeding it, and interest on purchase money, it will make three cents. Again I paid 30 dollars for 100 bushels of corn, and made 1130 pounds—1130 pounds at 3 cents, $33.90; which, after paying for the corn, would leave me but $3.90 for buying, feeding, interest, &c. Therefore, I conclude if I pay 30 cts. for corn, I must sell for 3 cts. or lose money by feeding. And further, from the above experiment, I am pretty well satisfied that the man who feeds hogs as they are usually fed in this country, in the open field, on the ground in the mud, exposed to the storms, without shelter, will not get rich very fast, unless he sells for very high prices. Wiseman C. Nichols.

Morrow Co., O., Dec. 7, 1861.

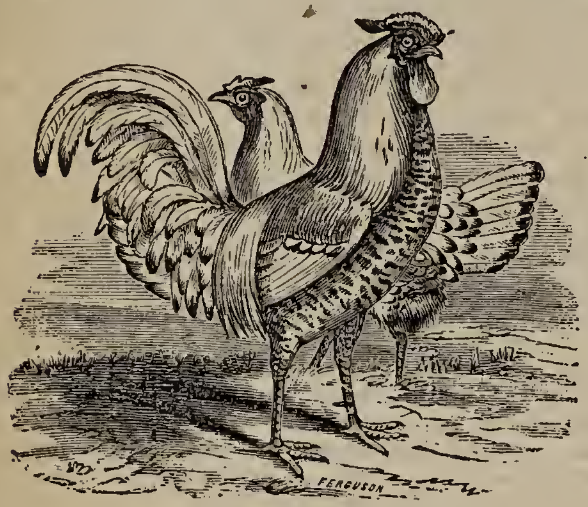
The Poulterer's Companion.

BEST LAYING FOWLS CLASSIFIED.

The following question has been repeatedly put to us, personally as well as by letter: "What breed or variety of fowls would you recommend keeping for a supply of eggs?" In reply we would name

I. The *White-face Black Spanish* fowls as laying the greatest number of pounds of eggs. The Spanish hens are notorious for abundant layers of very large sized eggs, weighing from two and a half to three ounces each. They require warm housing and abundance of good clean water, &c.

II. The *Black Poland*, with a white top-knot. The Polish fowls are prolific of rather large-sized eggs, and are slow to sit, in fact, rare incubators. Hens of this variety have been known to lay from two hundred to two hundred and fifty eggs in a year. Chickens rather delicate and difficult to rear.



Golden Spangled Hambugh Fowls.

III. The *Hamburg Fowls*. All the Hamburg fowls are distinguished as great layers of middling-sized eggs, but rich in quality, and like all great laying fowls, poor incubators; indeed, mostly everlasting layers; they are great favorites of those who require an abundance of eggs, rather than frequent broods of chickens.

IV. The *Crested Hamburgs*, like the foregoing, are great layers of rich, good flavored, medium sized eggs. Non sitters—never knew one that wanted to sit.

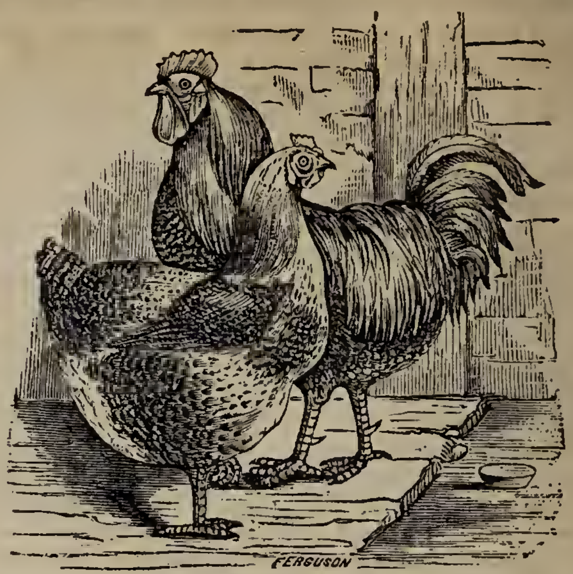
V. The *Game Fowls*, are next in order as good layers of rather small-sized, delicious eggs, excellent mothers and rearers of chickens, good for the table. Hardy and great foragers. Are preferred by some to all other breeds.

VI. The *Bolton Greys* are esteemed prolific layers, of medium-sized eggs of good quality; poor sitters, indeed, mostly what are called "every-day" layers, but less invariably so than some others breeds.

VII. The *Dominique*. This well-known fowl, taken "all in all," is generally considered one of the very best we have, being pronounced good layers, good sitters, good mothers, and eggs and flesh of first quality.

VIII. The *Dorkings* are moderate layers of large and well-flavored eggs; sit steady, and are excellent mothers, rather delicate in constitution, chickens not easy to rear. They are to be ranked among the largest of fowls, and are esteemed the best in quality of flesh.

IX. *Brahmas and Cochins*. These fowls are more noted for early than abundant layers. Eggs of good quality, averaging about two ounces each—rather small in proportion to the size of the breed—good mothers, chickens strong, grow rapidly with good feeding, fit for the table at four months old, not after, until they arrive at maturity. As has often been said, they are *early* and *excellent* layers, and arrive at maturity earlier than any other large breed. By the term "maturity" is meant the age at which a pullett will commence laying, and thus perpetuate its race.



Asiatic Fowls.

X. The *Guinea fowl* is prolific of eggs, small but very nutritious; shells hard, and on that account can be transported any distance with safety. The young Guinea fowl is delicate eating, the flesh little inferior to our partridge, and is in season when chickens and Prairie hens are scarce—in March.

Good Layers.—We conceive it a good hen that will lay 150 eggs the first year, 130 the second, and 100 the third; after which she should "go to pot."

To Make Hens Lay in Winter

There is another inquiry which we may as well answer at the present time—"How shall we manage with our hens in order to have them continue to lay in winter, the season when eggs are scarce and sell at the highest price?" The most practical mode that occurs to us would be to confine the earliest pullets after they are two or three months old, feed them well, and keep them until the first of October, when they should be allowed full liberty. A week or ten days afterwards they should be confined in a warm, dry room, where the vicissitudes of the weather and storms will not reach them. They may now be allowed a spacious enclosure, in company with the cocks from the former year's broods, and thus kept for several weeks more. They will soon begin to lay, and continue to do so—not every day, however,—until the spring following. The number of eggs to be expected in winter, compared with warm weather, will not amount to more than three-fourths, but the difference between 12 and 28 or 30 cents a dozen, will equalize and compensate for the receipts of those in summer.

The condition under which the laying hens can be protracted to the fullest natural extent, are systematic feeding with various kinds of grain, animal food, broken oyster-shells, old lime morter, gravel, and *plenty* of *clear* and *fresh water;* warmth in the end of the fall and winter; cleanliness in their house and roosting places.

We have known some persons so careful in this matter as to dig into banks facing the south or southeast, and form rooms for them there, with glazed doors and windows in front, to give sufficient light and heat from the sun, where they can have proper heat, and always a supply of earth, so essential for dusting themselves. In mild weather they may be let out and enjoy their liberty, but in cold and stormy weather the closer they are kept the better. Under such treatment we may safely look for a plentiful supply of eggs at all seasons. C. N. Bement. *New-York, November*, 1861.

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☞ In most counties in England the dry summer and autumn have partially preserved the potato crop, although it would appear that in no county has there been an entire immunity from the blight.

Domestic Economy and Cookery.

OLD RAILS FOR KINDLING.

Those who know the inconvenience of trying to build kitchen fires on cold winter mornings, with wet, green, or large wood, and who have had the room filled with smoke while vainly endeavoring to make it burn, will appreciate the value of a good supply of kindling-wood for winter use. Farmers who fence their fields with the old fashioned crooked rail fence, always have a considerable amount of broken and refuse stuff, which have been seasoning for many years, and which if finely split makes good kindling wood. The farmer who has a hundred acres fenced in this way into ten-acre lots, has 800 rods of fence; and if the rails last on an average forty years, he has the spare and broken rails of 20 rods annually, which are equal to at least three cords of wood; or six cords if they last only 20 years. These are worth saving, instead of being allowed to lie and rot on the ground. as they are sometimes by thriftless farmers. If the rails are hard wood, they make valuable fuel; if of soft wood, as basswood, white cedar, pine, &c., they will kindle more readily. It is very important to keep them under shelter, that they may become and continue thoroughly dried. Now, at the close of the season, it should be attended to, if not already performed.

* * *

[For the Country Gentleman and Cultivator.]

To Hang up the Buggy Harness and Shafts Together.

Persons have often looked with amusement and surprise to see how quick I harness or unharness my horse, and then the harness and fills are hung up in the bargain.

In the first place, my harness is made with the collar open at the bottom, and no buckle, but the hames are fastened to the collar, and there is one buckle to fasten them both. The tugs and hold-back straps are not unhitched; the lines lie over the dash, where they will not get under the horses feet; they may be unbuckled from the headstall, or remain with it and hang all up together. I have a wooden hook, like an ox bow, with half the length of one side cut off, so as to hook under the back saddle, collar and headstall. A cord is attached to the long end of the hook and put up over a pulley, then through another pulley, and down about three feet to one side of the horse. Unbuckle the belly-bands and the hame-straps, put under the hook, pull all up, and make the cord fast to a small hook at the side of the carriage house. A horse will soon learn to place himself back into the breaching, when the harness and shafts are let down, three or four buckles are fastened, and he is harnessed.

This I learned from my friend B. of Oneida, N. Y. This is worth a wood engraving, but I have not time now to mark it out, so you can give us one. S. Foster.

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[For the Country Gentleman and Cultivator.]

AMBER AND COPAL VARNISH.

On looking over the volume for last year I find inquiries for amber varnish. Excellent varnishes are imported into Canada from New-York, and sold in quarts and pints, besides the larger wholesale quantities. As these varnishes are made by using steam in their preparation, they can be more *safely* and conveniently made than by melting the materials over a common fire. Nevertheless some of your readers wish to know "how to make it," so I will give you the following:

Amber Varnish.—Melt 8 ounces Chio turpentine; pour in 1 pound of powdered amber by degrees, stirring it all the while; set it on the fire for half an hour; then add 2 ounces of white rosin; then stop the cover close, and increase the fire till the whole is melted. To this add 1 pound of *hot* drying oil, and then, by degrees, a quart of oil of turpentine. Amber can only be dissolved clear by melting it with some less glutinous gum. Same process for copal varnish.

You will perceive that it is rather a dangerous manufacture, on account of the inflammability of the substances used. The best way therefore is to make it out of doors, and have an iron cover ready to put over the pot it is made in, as that is the safest way to extinguish it if it takes fire. Rusticus.

[For the Country Gentleman and Cultivator.]

TO COOK CARROTS.

The common way of cooking them is in soups, or with what farmers call pot vituals; but my wife has a way of cooking them as follows: Scrape the outside; then slice about a quarter of an inch thick; put them in a spider, and add just water enough to cook them. After they are cooked, add salt and a little butter, and let them dry down a little, when they are ready for the table, and, by the way, are not bad to take in reasonable doses. I esteem the carrot one of the healthiest vegetables we raise in the garden. A. M.

* * *

HOW TO CURE HAMS AND SIDES.

There are many ways to cure hams, but some of them are not desirable, unless we are satisfied to eat poor hams in preference to good. A ham well cured, well smoked, and well cooked, is a favorite dish with most people, but there are very few indeed who can relish ham which has been hardened and spoiled by salt, or tainted for the want of salt in curing, and may be worse spoiled in cooking; but if ham is spoiled by too much salt, or too little, or becomes tainted before the salt has thoroughly penetrated through it, I defy any cook to make a good dish out of it. I have tried many ways in curing hams, and have lost them sometimes by having them become rancid and tainted in warm weather, and also by having them so salt and hard that they were unpalatable.

I have for some twenty years practiced the following simple recipe in curing pork hams and shoulders, and find it preferable to any recipe I ever tried, and when I have had any to sell they have taken the preference of sugar cured hams with those acquainted with them.

I trim the hams and shoulders in the usual way, except I cut the leg off close up to the ham and shoulder, to have them pack close, and as being worthless smoked; then sprinkle a little fine salt on the bottom of a sweet cask, and pack down the hams and shoulders promiscuously, as they will best pack in, and sprinkle a *little* fine salt on each laying, just enough to make it show white; then heat a kettle of water and put in salt, and stir well until it will bear up a good-sized potato, between the size of a quarter and a half dollar; boil and skim the brine, and pour it on the hams boiling hot, and cover them all over one or two inches deep with the brine, having put a stone on the meat to keep it down. I sometimes use saltpetre, and sometimes do not; consider it useless, except to color the meat. I now use my judgment as to the time to take them out of the brine. If the hams are small, they will cure in three weeks, if large, say five weeks; again, if the meat is packed loose, it will take more brine to cover it, consequently more salt will penetrate the meat in a given time than if it is packed close; on this account it is useless to weigh the meat and salt for the brine, as the meat must be kept covered with the brine, let it take more or less. Leave the casks uncovered until cool. When the hams have been in brine long enough I take them out and leave them in the cellar, if the weather is not suitable to smoke them. I consider clean corn cobs better for smoking meat than anything I have ever tried, and now use nothing else; continue the smoke until it penetrates the meat, or the skin becomes a dark cherry brown. I then wrap the pieces I wish to keep in paper any time before the bugs or flies have deposited their eggs on them, and pack them down in casks with dry ashes, in the cellar, where both hams and shoulders will keep as good as when packed, through the summer or year. Cured in this way it is hard to distinguish between the shoulder and ham when boiled.

A large ham will often taint in the middle before salt or brine will penetrate through.

How to Cure Side Pork.

So much for smoked meat; now if any one wishes to have his side pork a little better, and keep better than any he has ever had, let him try my way, and if he is not satisfied, let me know it through the Ohio Farmer.

Take out the bone and lean meat along the back, cut and pack the pieces snugly in the barrel, put more salt on the bottom and on each laying of meat than will probably penetrate the meat; then boil and skim the old brine (if it is sweet,) and add enough to it to cover your meat two or three inches over the top, made strong like the ham brine; and as soon as you pack your meat, pour the brine on boiling hot; it will penetrate the meat much quicker than cold brine, and give it an improved flavor.

While I was making and pouring the brine on my hams and pork just now packed, I thought the public might be benefited by a knowledge of my way of curing meats. I therefore publish it. Try it. A. Aylsworth, *in Ohio Farmer.*

THE CULTIVATOR.

ALBANY, N. Y., JANUARY, 1862.

☞ In opening a new Volume of The Cultivator—the Tenth of its Third Series, and the Twenty-ninth from its establishment—the Publishers tender the compliments of another New-Year season to their readers,—not the less cheerfully or sincerely because of the troubled times through which both City and Country are now passing.

The present Number, which is to renew our intercourse with so many friends of long standing, and to become the medium, as we hope, of an introduction to some new ones—contains a Farmer's banquet, to which we are proud to invite our guests. In something like *fifty different articles*, aside from the shorter Notes and the closely filled columns of "Inquiries and Answers," nearly all the manifold interests of the Farmer are represented, and we think we may fairly add, in both an instructive and interesting way. For variety, practical directness, and value, we doubt if more has ever been compressed into a single issue either of this or any other similar Journal. It is the kind opinion of an old friend and agent, as published on page 23d, who has been an active and careful reader of The Cultivator from the very beginning, that the "last Volume fully equals any of its numerous predecessors;" and we we shall hope to deserve a similar verdict upon the Volume now begun, when its course too shall have been completed.

Taking the present Number as an example, the subscriber to The Cultivator may expect in the course of the Year, to receive something like five or six hundred plain, pointed and practical articles for his Fifty Cents! If read with any degree of thoughtful attention, the money *cannot be thrown away.*

We therefore appeal to all who appreciate the character and objects of our Journal, to endeavor at this time to add to its list of subscribers. It has not only cheapness as a recommendation, in war-times; but, in comparison with its contemporaries, appearing more frequently and costing two or three times its subscription price, we do not hesitate to ask for it the preference and support of all who seek Agricultural intelligence and information, either as regards amount or kind. And we promise that it shall be behind none in these respects, nor in the degree of expense and labor devoted to its improvement.

For Terms, &c., see Business Notices on the last page. Specimen Numbers supplied freely, as may be requested. We trust no reader, to whom, upon careful examination, The Cultivator seems worthy of the popular favor it has so long enjoyed,—will rest satisfied until he has been enabled to send us a Club of eight or ten names at least for 1862.

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Please Attend Early to the Formation of Clubs.

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The Black-knot.—H. T. Brooks of Wyoming Co., N. Y., says he had determined either to kill his plum trees or the black-knot. The consequence was that he killed or kept off the knot and saved the trees. This is unquestionably the right determination. Those who try to save both (by neglect) save the knots only, and these in abundance. Prompt excision at all times will make short work of the disease.

☞ In connection with the "World's Fair" to be held next season at London, the Royal Agricultural Society of England have determined to give something of an international character to their customary Show. The location of this exhibition has already been selected in or near the city of London; and the Highland and Agricultural Society of Scotland, and perhaps other prominent societies also, are to omit their usual meetings, in order to concentrate the whole interest of the country upon the one held at the metropolis. This is to take place during the week commencing June 23d. At the meeting of the Society's monthly Council, Nov. 6, it was resolved "that there be separate classes, and that prizes be offered for foreign breeds of cattle, horses, sheep, and pigs," and His Royal Highness the President suggested that a committee should be formed for the purpose of immediately communicating with foreign countries, with a view of carrying out this resolution, and the following noblemen and gentlemen were requested to act on such committee—the Earl of Powis, Lord Feversham, the Hon. Colonel Hood, the Hon. W. Cavendish, M. P., Mr. Brandreth Gibbs, Mr. Fisher Hobbs, Mr. Milward, and Mr. Wells; and, on the motion of Mr. Acland, it was resolved that it be referred to this committee to consider and to prepare a list of prizes, and to report to the next council.

There are some departments in the Agriculture of the United States which ought, by good rights, to be represented, either at this exhibition of the Royal Society, or at that of All Nations—particularly our Butter and Cheese and Grains. We know that some samples of Butter are to be ready for shipment, and we sincerely hope that both in this respect, and in Cheese, our best Dairy farmers may have fair samples of their products where English buyers and consumers can examine them; we have a foreign trade in these articles that it is well worth some trouble and expense to cultivate.

We should like also to have our best Herds there represented; and it is not impossible, indeed, that both Short-Horns and Devons of American breeding may be shown.

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Death of Hon. Henry Wager.—The Utica papers announce the death of Mr. Wager, at his residence in Western, Oneida Co., on the 20th of Nov. Mr. Wager was an extensive farmer, and for several years devoted a large part of his time to the promotion of the interests of agriculture. He was formerly President of the New-York State Ag. Society, and for eight or ten years one of the most active and useful members of its board of management. He was also for several years a very efficient officer of the United States Ag. Society, of which he was President in 1859. As one of the Trustees of the New-York State Ag. College, he also labored untiringly to promote the interests of that institution.

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☞ We lately heard an old gentleman who has made his way to great wealth from a very small beginning, and who for some years past has interested himself particularly in agriculture, descanting on the importance to the Farmer and his hands, that their Meals should be promptly served at the expected hour. He appeared to think that punctuality, here as elsewhere, is one of the foremost of the virtues; and that where the housewife is never behind hand with breakfast, dinner and supper, "and always gets up in the morning good-natured," a Farmer's road to prosperity and success is straight and sure. "But," he added, "how can the meals be made ready with promptitude, particularly the breakfast, unless there is a due supply of proper kindling wood?" It struck us that, at this season, it might be appropriate to jog the memories of husbands or sons, with regard not only to the preparation of Fuel for present use, but also to the provision of a sufficient supply against busier seasons of the year. If we could quote from memory the discourse of our friend just alluded to, the benefit of regularity and system in the Household Economy of the Farm would seem nearly as great as in its out-door operations; with order governing in both, we may secure the pleasant and profitable working of the manifold machinery, so to speak, of the farmer's life. It is not at all impossible that the wife has, in many cases, to bear the blame and burden of delinquencies which should really rest on other and broader shoulders.

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☞ SHORT-HORN PRICES do not go down in England, notwithstanding the general withdrawal of Americans from competition as purchasers. Our late foreign exchanges mention the sale of a Bull Calf by Mr. S. E. Bolden, well known as a leading breeder, to a gentleman residing near Liverpool, for 500 guineas, say $2,500. The age of this costly specimen was about 14 days, and he consequently cost his purchaser something like *a dollar and a quarter an ounce*, or nearly $20 a pound! "This is an unprecedented event in the annals of Short-Horn breeding. Whether a calf not three weeks old is worth 500 guineas, is, of course, a question that we cannot decide; but it may be said with truth, in reference to the seller, that an animal is worth what it will bring; and, with equal truth, in reference to the buyer, that the practical value of a prime-bred bull cannot well be estimated."

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DRYING UP COWS.—A correspondent at Ottawa has a very fine heifer that has been nearly dried up by straying away, and wishes to know if its milking qualities can be restored. It is yet several months before she calves again. We have had no experience with such disasters, and cannot say what probability there is of her making a good milker in future. It usually happens when a heifer is dried long before calving, she is apt to run dry about the same time the next year, and to prevent this occurrence, she should always be milked very clean, and not soon dried. This rule is not, however, invariable. The best course would be to milk the young animal very closely, and give her plenty of succulent food, especially in autumn, or towards the time of becoming dry.

APPLES IN WESTERN NEW-YORK.—The Orleans American says—"There have been shipped from this place, (Albion) this fall so far, 54,221 barrels of apples. This is pretty well, considering the apple crop was so nearly a failure this year. The probability is, that about the same number of barrels have been shipped from Medina and other points in this County. We understand there were between 75,000 and 80,000 barrels shipped from this port last year. It will be noticed that we had more than a two-third crop of apples in this section this year, as compared with last; the increase of price this year, over that of last, will afford nearly or quite as large a revenue to our farmers from this source, as in ordinary seasons."

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☞ THE BEE-KEEPER'S ASSOCIATION met at Cleveland, O., on the 20th Nov. The principal topics discussed, says the Ohio Farmer, were the best method of *wintering and feeding bees*. There were about twenty-five bee-keepers present from Ohio, Kentucky, Indiana and Michigan. If those interested in the rearing of bees knew how much valuable information they might get by attending these meetings, they would not grudge the time and money. The next meeting of the Association is to be held at Cleveland on the 14th of March next.

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☞ "THE COUNTRY GENTLEMAN is much liked by the progressive farmers of Bucks county (Penn.) and is confessedly the best agricultural periodical now issued. Our Agricultural Society have introduced it in many places by awarding it as a premium in lieu of money.

Doylestown, Oct. 30. P. & D."

A FRENCH CRYSTAL PALACE.—An exhibition is appointed in France for 1865, in which every attempt will be made to outstrip all that England may have done previous to that time. Sir Joseph Paxton, it is said, has been retained by the Imperial Government, and a crystal edifice of unheard of proportions will rise on an elevated site near St. Cloud. A dome, 500 feet high, and of span capacious enough to enclose both those in course of erection at South Kensington, will crown Sir Joseph's new design. A complete plan of this palace, it is said, be sent over for the International Exhibition, and an ample portion of space will be accorded every country without application.

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☞ The following statement is published with regard to the crops of KENTUCKY for 1859 and 1860, and Hon. L. J. BRADFORD, President of the Agricultural Society of that State, expresses the opinion in the Ohio Farmer that the crops for 1861 must "show a very large increase over 1860." As to present appearances he says that "the wheat, barley, rye and grasses look promising. Stock looks very fine; our pastures were never better at this season of the year."

PRODUCTION OF KENTUCKY.	1860.	1859.
Total number of Hogs,	1,009.153	1,544,274
Pounds of Tobacco,	97,906.903	95.505,548
Tons of Hay,	115.795	143,157
Pounds of Hemp,	7.691.816	10,101,157
Bushels of Corn,	61,005,316	51,995,956
Bushels of Wheat,	6.759.329	5,868,178
Bushels of Barley,	213,997	372,136

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YIELD OF WHEAT IN ILLINOIS.—Mr. A. J. Aney of Logan county, reports in the *Prairie Farmer*, that he has thrashed seventeen lots of wheat the present season, amounting in all to 727 acres, which yielded 11,696 bushels, or an average of 16½ bushels per acre, including winter and spring wheat together. The yield of spring alone shows an average of about 15½ bushels. Mr. Any thinks these averages are about the averages of Logan and adjoining counties.

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THE COUNTRY GENTLEMAN.—I have usually taken your paper, but thinking myself too poor to pay for it last year, I discontinued it, and now I find myself too poor to do without it. I therefore enclose you $5, and wish you to send me the COUNTRY GENTLEMAN, with the back nos. from Jan. 1, 1861. C. H. S. *Point Fortune, C. E.*

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THE CLINTON GRAPE.—This grape, although not of first-rate quality, and entirely rejected by some on account of its austere flavor, appears to be an admirable keeper. Cultivators who have made the experiment, have not found it difficult to keep till spring—when its peculiar quality is more grateful than at some other periods of the year.

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The Annual Register of Rural Affairs.

The number for 1862 of this attractive, original and valuable little annual, has just been issued, and a copy has found its way to our table. The articles in this number, like those of the former ones, are all original, and chiefly from the accomplished and practical pen of JOHN J. THOMAS, one of the editors of the *Country Gentleman*, a journal which we have often commended as the foremost of our agricultural exchanges. The opening chapter is upon Farm Buildings, with several excellent designs for barns. The next article is entitled, "Vegetable Physiology, or How Plants Grow;" a clear, practical treatise on the elementary points in the study of botany, illustrated by sixty engravings A brief article on "The Grasses," with several illustrations, next follows. Mr. G. E. Woodward contributes an article upon "Balloon Frames," giving the *modus operandi* of constructing buildings by this method, with designs illustrating the text. The remainder of the work comprises short articles on Lightning Rods, Bee Hives, Fruit Culture, Domestic Animals, The Dairy, Rural Economy, Useful Tables, &c., making a work of 125 pages, and having over 150 engravings. We know of no way in which so large an amount of really practical and useful reading for the farmer can be obtained for so small a sum, and those of our readers who purchase a copy upon recommendation, will thank us for telling them where it can be had Price 25 cents per copy. Address L. Tucker & Son, Albany, N. Y.—*Maine Farmer.*

The Dairy Department.

ZADOCK PRATT'S DAIRY FARM.

The Farm of Col. Pratt of Prattsville, Greene Co., has been already briefly described and illustrated in the Country Gentleman, but a very little repetition may not be unpardonable after visiting it in person.

It contains 365 acres, forty of which are fine alluvial soil—the residue, which is called hemlock land, (loam and gravel,) lying on the slope of the Catskill mountain. Altogether there are not probably more than 300 acres in actual use for farming purposes. As already intimated, the hemlock was originally cut for the purpose of obtaining the bark for use in Col. Pratt's tannery, and the land afterward cleared up, seeded down, and fenced with stone wall, of which about *five miles* have now been laid,—and the whole converted into a Dairy Farm, upon which fifty cows have been kept throughout the last five years.

As we have already published Col. Pratt's statement as to the products obtained (see Co. Gent. for Feb. 7, 1861, page 98,) together with the plan of his farm, we pass at once to some points of practical interest in dairy management elicited in conversation with him and his manager, Capt. Newcomb.

About Butter-Making.

Milking the Cows.—It is important *always* to treat Milking cows with kindness; blows and harsh words have as much effect in rendering them ugly, as they would probably have upon children or human servants. Especially at milking, it is well never to forget that gentleness is an essential requisite; as far as possible to have the same milker always attend to the same cow, and in any case to have the operation *thoroughly* as well as kindly completed. By attention in these respects, "spilt milk," I was told, was an almost unheard of phenomenon here; the cows are, moreover, always milked in the stable, with a feed before them, and *with great regularity* at 6 o'clock morning and evening the year round. No one of these items should be overlooked.

Carrying in the Milk.—The maids who do the milking are not bothered to carry in the milk as fast as a pail is filled; but some one else, generally Capt. N. himself, replaces the full pail with an empty one, carrying in the milk and registering its weight. It is then strained from the pail into a large can, stirred around with a long handled ladle until the foam disappears, and then ladled into the pans. Two points are here worth noting particularly: 1. If the milk is strained directly into the pan, the eye alone will be depended on as to the quantity poured in, and the foam gathered on the surface is thought to be just so much in the way of the rising of the cream. 2. The milk of different cows will differ somewhat as to the time required for the perfect rising of the cream; more careful watching is therefore necessary as regards each separate pan, if the milk is set separately, than if that of several cows is so intermingled before setting that the cream on all must rise alike.

Setting the Milk.—Tin pans are used of what is there commonly called an "eight-quart size." But on trial we found the pan actually to contain about seven quarts; it is large in diameter with flaring sides. The quantity ladled into each pan varies—in hot weather two and a half quarts, and in cooler weather three quarts. Inquiring how just these quantities should have been pitched upon, and why they are so carefully adhered to, we were told that accurate trials had been made with different quantities, until the foregoing had been decided on as giving beyond question the most cream. In cool weather the milk may stand longer than in hot weather, without danger, consequently it will bear to be a little deeper. The next thing for us was to ascertain exactly *how deep* the milk stood; and by measuring, it was found that in the pan containing 2½ quarts the milk was only *one and a quarter inches in depth*; in the pan containing 3 quarts, it was one and a half inches deep. This is a very strong argument in behalf of *shallow setting*, the practice referred to having been closely followed for two years past, and, as is thought, to very great advantage.

Time to Skim the Cream.—If the milk fairly begins to be thick at bottom it is thought ready to skim; it may be allowed to stand until it can be cut with a knife all through, but there is great risk in too long standing—if it once begins to turn partly to water, the cream will have a bitter taste that can never be overcome.

Temperature.—The temperature of the milk room is kept at as nearly 62 deg. the year round as possible, and probably runs from that point to 65 deg., or in very warm weather perhaps to 70 deg. or 72 deg., but the latter are only exceptional cases.

Churning.—The churning is done in two barrel churns, the dashers of which are moved by an overshot water wheel of perhaps 14 feet diameter just outside the churn room. The quantity churned at once is 13 to 14 gallons, yielding from 30 to 33 pounds butter, in each churn. In hot weather the temperature is carried down if possible to 61 deg. at starting, by means of ice, as the agitation of the milk with the warmer atmosphere will heighten this temperature somewhat before the butter comes; but 62 deg. is thought to be just the right point if it can be got and maintained. Cold water may have to be put in to regulate the temperature during churning, but this is not done unless absolutely necessary.

The Butter is now taken from the churn, and washed generally three times or until the water no longer brings away any buttermilk. It is next weighed, and salted with the best Ashton salt, sifted and accurately weighed out in the proportion of an ounce to a pound of butter. The only exception to this rule is in very hot weather when a slight addition is made to the quantity of salt to replace what will be dissolved in getting out the last of the buttermilk—say 21 ounces of salt to 20 pounds of butter. After salting, the butter is put in pans on the cool stone floor of the butter cellar, where it stands four to six hours before the last of the buttermilk is worked out, after which it may again stand until the next morning before packing.

Packing the Butter.—The new firkin has a pail of boiling water thrown into it, which remains there until cool; brine is then substituted which is allowed to stand for a day or two before the butter is packed. When filled with butter, a cloth is spread over the top, and a layer of coarse Turks Island salt, washed clean, placed upon the cloth. Temporary tops for the firkins are made of *round flat stones*, which are laid over them from the time the butter is packed until the firkin is finally headed up to go to market. These stones are thought to keep the temperature cooler and more even than any other cover. The firkins, it should be added, stand upon a wooden floor resting upon joists, or upon the joists themselves, so as to let the air pass underneath them.

Marketing.—It has been found the neatest way of marketing to take off the salt from the top of the butter, turn down the firkin to let the brine drain off, and then replace the cloth wrung out in brine. As to the keeping qualities of the butter, there is never any difficulty; its character, the season through, is remarkably even—the first time, for instance, of sending a lot to New-York last spring, April 2d, seven firkins were sent, of which three were new, and the other four kept over from the preceding fall; the butter dealer was afterwards asked if he had been able to detect any difference between them, but he had not, the whole selling as spring made butter.

Inquiries and Answers.

Bad Weed.—We have a weed which is just becoming very troublesome, a specimen of which I here enclose. It appears perennial, has a long root. It is only just this season getting into the fields here. I hear it is common in Germany. A. Francis. *Canada West.* [This weed is the *Echium vulgare*, or Viper's Bugloss—called also Blue-weed and Blue-devils. It is known to the French by the name of *Herbe aux Viperes.* It is a very troublesome weed where it becomes introduced—it is an extensive pest in some parts of Maryland and Virginia. We advise our correspondent very carefully to eradicate every plant—"a stitch in time will save" one thousand.]

Making Sausages.—"Our folks" are anxious to get a good receipt for making sausages, and would feel greatly indebted to you if you would publish one at your earliest convenience. H. W. H. *Merrillsville, Mich., Nov.* 21, 1861. [First, procure a good machine for cutting sausages, instead of doing it by the very tiresome old mode of chopping it by hand. Good ones may be had for some two or three dollars. Then, to every 100 pounds of the chopped meat, add two and a half pounds of salt, eight ounces of sage, and ten of pepper—and mix all the ingredients thoroughly. It is a common way among housekeepers to "cut and try," that is add a little more salt and a little more pepper and sage, tasting, and retasting, and calling in the aid of the palates of others, till the thing has too much pepper and salt, and is probably spoiled. The above rule is simple, easy, and good.]

Disease in Pigs.—Will yourselves or some of your correspondents give me some information in regard to a disease by which I have lost a number of pigs. They seem to lose the use of their hind parts, and lie around, sometimes dragging themselves over the ground. Some of them seem to eat well, and others lose their appetite. One of my sows had eight pigs, and they seemed to do well enough till about three weeks old, and then died as aforesaid. Another sow had five, all looking well till a few days ago, one of them died, and now another is unable to use its hind legs, but eats corn well. The sows had been shut in small pens, but, till a few days, the pigs have run out. Their feed has been corn, milk and slops from the house. I can't find anybody who knows anything about it, or who knows what to do for them. I have fed sulphur on the recommendation of some, and also feed them stone coal once a week. P. F. *Dwight, Livingston Co., Ill.* [This disease is not very rare, and is termed *paralysis* by some. It is supposed to originate from indigestion or disordered stomach. We would recommend *charcoal* finely pulverized, and given with food in quantities at a time of about a heaped teaspoonful to an animal of 100 pounds, and greater or less for a larger or smaller animal. It may be increased if necessary till it operates as a mild purgative. A portion of green food may be useful, and strict cleanliness should be observed.]

What is a Heaped Bushel?—What constitutes a *heaped bushel.* Some one may say, a *heaped bushel basket.* I know as a *practice* it does; but as a *rule* I know it cannot, and at the same time be *right.* One basket will have a larger top diameter than another; both hold the same when *level full.* but when *heaped*, the larger diameter will hold the most. It may occur to some that a perfect answer is, *two heaped half bushels*, or *one heaped bushel measure.* But there they will not be alike; that is, a *heaped bushel* measured in the two ways will not be the same. What then is the answer? What constitutes a *legal heaped bushel*? This is what I want to know. Will the Country Gentleman please answer? "Fulton." [The United States bushel contains 2150.42 cubic inches; its dimensions are 18½ inches inside, 19½ inches outside, and 8 inches deep; when heaped, the cone must not be less than 6 inches high, or equal to 2747.70 cubic inches. That is, to make a heaped bushel, 597.28 cubic inches must be added to the struck bushel, which is equal to about three-elevenths added, or a little more than one quarter. If the measure gives less than this, it is too narrow and deep; if it gives more, it is too broad and shallow.]

Clover Seed.—I wish to get some information through your paper, from some one who has had experience in the business in regard to saving clover seed; and first, will clover seed be injured by standing in the field uncut till after freezing weather, when it ripens early, and is mature? And secondly, can it be sown in the chaff after threshing it, to good advantage? E. S. *Beekmantown, N. Y.* [Clover seed, if well ripened, and not sprouted or swollen, will keep well in the chaff, in the field. It will sprout freely in the chaff, after threshing, if sown very early in spring, and rolled in or very lightly bushed, or if the spring proves rather moist.]

Feeding Sheep.—I find your "Inquiries and Answers" one of the most valuable parts of your paper, and would ask—1. Which is the most profitable breed of sheep to buy to feed for mutton?—2. Is a Leicester or South-Down worth more by the pound, *live weight*, as a stock for feeding, than a Merino, all being in similar condition?—3. When, and in what manner, shall I commence feeding a flock of Merinos, intending them for sale in March or April?—4. What kinds and quantity of grain (and roots, if any,) should be given at the time of highest feeding?—5. What is the value of oil-cake as compared with corn—or in other words, when corn is worth 30 cents per bushel, as it is here now, what should be paid for cake? You published last spring a communication from S. Edwards Todd, Esq., giving his mode of fattening *cattle*, but I have seen no such detailed statement as to sheep. "G." *Oakland Co., Mich.* [These inquiries relate to matters of much practical importance, and we shall be pleased to hear the results of experiments made by any of our readers. Details of facts and experience are what is wanted, as they will afford the surest guide to practice.]

Horse Pitchfork.—Will you please inform me what kind of horse-power pitchfork is the best adapted to the wants of a farmer. So far as I can learn, there are none sold at the agricultural stores of this State. Where can they be obtained? W. H. Brevoort. *Walesboro, Ind.* [We are unable to decide upon the merits of the different horse forks, and we must refer you to the descriptions of the several kinds which have been published in the Country Gentleman during the present season. A very good one can be procured of Emery Brothers of this city.]

Honey Locust.—Is there any certain way to grow the honey locust from seed?—would like to try a hedge of it. W. H. *Milton, Ky.* [If the seeds of the honey locust are good and well ripened, they usually grow readily, although some prefer to scald them, as they do the common locust. In the latter case the seeds are placed in basins not holding over a quart or so, and boiling water poured on. After standing several hours, a part swell, and the process may be repeated on the rest after these are picked out. Larger quantities of water do not cool soon enough, and the seed might be destroyed by the heat. We have usually found the honey locust to grow without scalding.]

Cutting Bushes.—What is the best season of the year to cut bushes, and not have them sprout? O. Morse. [In summer, after they have expended most of their energies in growth, but have not quite ceased growing—a time which varies with different bushes, according to kind, soil, season, &c.]

Weight of Corn per Bushel.—Will you be kind enough to state the standard weight for corn in the State of New-York? We along the Pennsylvania line, are particularly interested in knowing whether it is 56 or 58 pounds to the bushel. I am aware that it was formerly 56 pounds to the bushel, but whether it has been changed or not, I am not certain. Some say it was changed to 58 pounds. J. F. O. *Bradford Co., Penn.* [The standard bushel of Indian corn in this State is 58 pounds.]

Culture of Flax.—I am anxious to get all the information that you can give about the cultivation of flax, and wish to know the best varieties of flax for quantity and quality. Wm. Flower. *Montreal, C. E.* [We hope some of our readers who have had experience in the culture of flax, will respond to the above.]

Slitting Saw.—Would it be out of your line to furnish a plan in The Cultivator, of a "Portable Upright Saw," for splitting fence stuff, palings, or sled-runners, and such like?—if so, would any of your implement-makers furnish a drawing so that I could construct one. My reason for applying to you for this is that I am no "inventor," but prefer to use things that have been tried and approved, instead of wasting my time about uncertainties. Moreover, I have been informed that your country people have a simple and compact way of building these. I mean such a machine as could be used with a one or two-horse power. I wish it for my own use, and not to make money by building them for sale. Moreover, I do not want to be harassed with any "Patent Rights."

Fairfield, C. E. RUSTICUS.

Oxen for "Horse Power" Purposes.—A long time ago a correspondent of the Country Gentleman wished to know if oxen could be worked on an endless chain horse-power. Tell him yes, if he uses *wooden shoes*, to be put—

not on the oxen, but on the machine, in form of inch and a half strips nailed to every other cross piece in the platform on which the oxen stand. Use the oxen very gently, and but a little while at a time, till their feet and joints, and head too, (for the poor creatures become at first very dizzy,) are accustomed to the new work. By a little watching and training, their *irrigating* propensities may be controlled so as to take place while resting between heats. Otherwiso the platform becomes wet and slippery. J. W. *Alleghany Co., Pa.*

Apricots.—Will you be so kind as to inform me through the Country Gentleman, as to the best time for setting out and the best place for an apricot tree—also the manner of doing it, and oblige a subscriber to your paper. L. G. C. *Deerfield, N. J.* [Apricot trees require a dry bottom, with a cool rather than a warm aspect. Spring is the best time for transplanting. There is no peculiar treatment required, but only the ordinary precautions of taking up plenty of roots without mutilation, preventing their drying, spreading them out widely and evenly in the hole, filling in fine earth compactly among all the roots, and cutting back all the young shoots so as to lighten the head. The nearer the head is to the ground, the less will be the danger of the bark being killed by the sun's rays. Unless the tree is quite young, it will also be best to turn the same side towards the sun as before removal, as the bark becomes inured to the heat and bears it better after two or three years exposure.]

Spireas.—Your correspondent H. S. B., in his inquiry relative to Spireas, does not state whether it is the shrubby or herbaceous species concerning which he asks information. The mode of propagation of the herbaceous sorts is by division of the roots in fall or spring. The shrubby varieties are propagated by layers or by cuttings. The former operation may be performed at any time during the growing season by bending down one of the shoots and covering the lower portion with earth; the part so covered will soon take root and can be removed. Cuttings may be made early in the spring before growth has commenced, and planted in light soil, or they may be taken later in the season of half ripened wood, and with some protection from the sun and proper attention in keeping them moist, will soon take root. Such plants will of course be true to name. It is only when seeds are planted that there is danger of "sporting" as it is called. In the modes of propagation described above, each plant is a part of the parent and must be the same. G. B. H.

Rain Gauges.—Can you inform me through the Co. Gent. where graduated Rain Gauges can be had, &c I should much like to keep a record of the fall of water in this place, but I do not wish to go to much expense, though the result may be agreeable, and to the public gratifying. W. M. B. [Rain Gauges can be procured at Dexter & Nelligar's in this city for $2.50.]

Artificial Hatching of Eggs.—Please inform me through The Cultivator, how to construct an artificial hatching house, and for rearing the chicks. Is it best to have the fire in the hatching chamber or under it? Please mention the form, size, materials, the temperature best adapted for the purpose, &c. A. W. Day. [It would occupy quite too much of our space to furnish all the details our correspondent desires, which we the less regret as we can refer him to Bement's "American Poulterer's Companion," where he will find all the particulars. We can send him the book by mail post-paid for $1.25.]

Poultry.—I wish to ask a few questions of some of your numerous readers, to be answered through the "Country Gentleman," about keeping hens. There is a large portion of the population of this country given to mechanical pursuits, in both towns and cities, and by such, answers to the following questions would be thankfully received.—1. Can a mechanic, owning no real estate, but renting a house and lot, say half an acre, keep hens with profit?—2. What breed of hens will bear confinement the best?—3. What breed are the best layers?—4. Can hens be made to lay ten months in a year?—5. What is the cheapest and best food for hens?—6. How many hens can be kept in a yard 50 by 100 feet?—Can you tell me where I can get the "Golden Crested Hamburgh" fowl, and the price per trio? W. C. D. *Falls Village, Conn.* [Of C. N. Bement—see his advertisement, page 341.]

Cider Wine.—Will you or some of your correspondents, please publish a good receipt for making wine from apple juice, and oblige some of your readers. N. H. B.

Diseased Pigs.—I want to ask the correspondents of the Co. Gent. if they have ever had young pigs get sore and crack about the mouth, and dwindle, and if so, what is the cause and remedy. A. M.

ICE-HOUSES.

"Would you recommend building an ice-house on level ground, or dig into a bank? X."

The ice will keep as well in a house on level ground, as in any other way, as long experience has proved; but there is a convenience in having a bank on one side for filling. If the soil is sandy or gravelly, so as to promote ready drainage, or if plenty of small stones may be used, for the same purpose, an ice-house may be built on the north side of a bank, so as to drive the load of ice on the south side, and unload downwards, instead of lifting up, as when the building stands on level ground. When dug in the bank, a dry or unmortared stone wall may be built; a few horizontal scantling placed against it and secured; and vertical boards nailed to these scantling. A loose floor, with stones for drainage beneath, will answer. A common roof may be built, and one or two windows, always open, near the top of the building. The great secret of success in keeping ice, is to pack in sawdust, (chopped straw will answer tolerably,) so that there shall be about eight inches of well packed sawdust on every side of the ice,—below, at the sides, and on top; or a foot or more, if chopped straw. The top must be open to the air at all times. We have tried to keep ice, by shutting up tight all the windows and openings, and found it to melt rapidly; we have opened these, and the melting ceased. The reason was, when closed, the air in the apartment above, or attic, became partly cold, and consequently heavier; it immediately settled by its weight down through the sawdust and among the ice; although it had been cooled in the attic, it was still warm enough to melt the ice. But when the windows were thrown open, the warm air entered, it was too light to settle down among the ice, and none melted. A board shanty will keep ice as well as the most elaborate structure, provided the mass of ice which it contains, is well packed with eight or ten inches of sawdust on all sides, and plenty of air admitted above. But if the sawdust is not well packed, and loose places or partial openings are left, the whole thing will prove a failure.

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☞ We are pleased to learn that James O. Sheldon, Esq., of White Springs Farm, Geneva, N. Y., has just received by the steamer City of Manchester an importation of South-Down Sheep, consisting of a Ram and two Ewes—the former of which won the first prize as a yearling at the Royal Agricultural Society's Meeting at Leeds last summer, as well as the first prize, also, as the best ram in the County of Sussex. He was bred by William Rigden of Hove, Sussex, whose name probably ranks as second to that of no other breeder of South-Downs in England. Our South-Downs, in the United States, ought now to have no superiors; during two or three years past we have apparently had the pick of the best English flocks.

It will be noticed from an advertisement in the appropriate column, that Mr. Sheldon can now spare a few head of Short-Horns and Alderneys from his excellent herds of these animals.

◆

Penn. Hort. Society.—At the meeting of this Society held on the 18th Nov., the following persons were elected officers for the ensuing year:—President, M. W. Baldwin; Vice-Presidents, James Dundas, B. A. Fahnestock, D. R. King, Caleb Cope; Recording Secretary, A. W. Harrison; Corresponding Secretary, W. Saunders; Treasurer, Robert Buist; Professor of Entomology, S. S. Rathvon; Professor of Botany, Dr. W. Darlington; Professor of Horticultural Chemistry, James C. Booth.

☞ The Emperor Napoleon has just bought a Short-Horn bull in England, for which the Court Journal states that the price paid was over £500, ($2,500.)

[For the Country Gentleman and Cultivator.]

WHEN TO CUT BUSHES.

We have no doubt but that late in summer, when the growth of the season is just ended, and the plant has expended all its energies in growing, and is just falling into that rest so essential to vegetable maturity, is an excellent time to behead these plagues of the farm. But we have tried another season, when the labors of the year were not quite so pressing as is usual in summer or early autumn, and have found it so successful in our case, that we hold it worthy of commendation to others.

Many years ago there was a dense patch of willows on a swampy spot at one end of the meadow. They covered about half an acre, and were so thick that any animal, biped or quadruped, would find it difficult to pass through the thicket. It was waste land, good for nothing unless it were for wasps and hornets to occupy in rearing their young, or for the bob-o-link to pour out his noisy clatter. More than this, it was a grievous eyesore, that closely embodied phalanx of willows in full view of the highway, and the first object that greeted the eye in one direction from the windows.

It was in our school-boy days, and it so happened, as was then customary in New-England, our school adjourned over from Wednesday night before Thanksgiving, until the following Monday, to give the teacher time to go home and visit all his cousins and neighbors, the big boys to skate and attend turkey shoots, and every one to enjoy themselves in the ways best suited to their fancy.

Cold weather had *set in*, in earnest. The ponds were all frozen over, and the streams flowed noiselessly along under their icy blankets—dark clouds chased each other across the horizon, occasionally spitting snow as from very spite, and the hoarse north wind piped in doleful notes the birth of the season of storms and snowdrifts, of sleigh-rides and singing-schools. Of course our old enemies the willows, were firmly lodged in winter quarters. At least Jack Frost had one end of them firmly secured in his unflinching, relentless vice. Taking that fact into consideration, in connexion with the other more important one that we had two whole days all our own, to do what we pleased, with the proviso that we must not be pleased in doing any sort of mischief, we resolved to open speedy hostilities on our old hateful enemies the willows, and accordingly with a sharp axe in hand, we commenced our warfare, cutting them off smoothly and rapidly just below the surface. Our progress in the business was very good in these two cold days. The improved look of the meadow was an ample compensation. We have no doubt we made better progress in our studies that winter for the triumphs of this two days labor. But this was but the beginning of the end in this business. The removal of the willows revealed old logs and stumps; and there must be drains cut to take off the water that had fed the willows. So it was concluded to fence off that end of the meadow for pasturing while this operation was going on.

The result was this: The bushes were cut so low, that the first thaw covered their stumps with water, which froze firmly over them. In spring the stumps were under water for a long time. Whether they drank too much in this drowning process, we shall not presume to say. This we know however, that the subsequent growth was a very feeble one, and the browsing of the animals pastured there completed the work of destruction so effectually that on restoring the old swamp to the meadow, it was as destitute of willows as the desert of Sahara.

We have another piece of swamp, on which much earth had been carried by artificial means, and which in 1859 had become a tangled mass of willows and alders. In January of 1860, we cleared off a portion of this swamp by cutting the crop in the same way as before, just below the surface, when the ground was frozen. Two seasons of growth have passed since then, and the new sprouts make but a very feeble show. Another cutting, which can be effected in a very short time, would probably eradicate the bushes entirely.

Now we do not claim that we have taken the best time to cut our bushes. We state when we did, how we did it, and the result, leaving it for the intelligent agricultural world to draw their own inferences. We think however, that in winter, if frost favors the object and there is no snow to obstruct, it is the best time for us, for then it will not interfere with the ordinary duties of farming, and labor is cheaper. Then the bushes being firmly frozen in, every blow of the axe will tell, and there is no mud to annoy the operator. We have some belief that the freezing and thawing over the stumps, and the water that settles over them in spring, has something to do with drowning out these mischievous aquatic shrubs.

Richmond, Mass., Dec. 1, 1861. WILLIAM BACON.

* * *

[For the Country Gentleman and Cultivator.]

Sowing Winter Grain Late in the Season.

A correspondent of the Co. Gentleman, page 304, inquires with reference to sowing rye late in autumn.

Several years ago I had a mind to sow a field with rye late in the season, and upon making inquiry of many of our oldest farmers, I learned that this practice had been adopted with good success in a great many instances.

One good farmer told me that about the middle of December, (about fifty years ago,) in obedience to his father's request, he plowed about four acres of ground, and sowed it with rye, about one bushel per acre, and harrowed it in. On the next day snow fell about eighteen inches deep, and remained about that depth until the next March, when the grain had all vegetated nicely, and remained thus until the growing season came on. He assured me that he never saw a better crop of rye than this, even when it had been sowed early in autumn.

About four years ago I sowed a few acres of rye on the second day of December, and harrowed it in; sowed about five pecks per acre, and at the same time sowed about half an acre of winter wheat. On the next day after the field was finished, the ground froze up solid, and remained thus until mid-winter; but the grain did not vegetate until the next spring.

The rye was good, and perhaps better than it would have been had it been sowed early in autumn; but the wheat was not as good as I anticipated, and was very rusty.

When I was a small lad, I used to hear farmers say that rye should be sowed very early, say about the first of September, or very late, just before winter sets in.

Where the soil has not been well drained, I think it is far better to sow rye very late—so late that it will not vegetate until the next spring—than it is to sow it early in autumn; because when it vegetates in the fall it is very liable to winter kill, more or less; but when it is sowed so late that it will not vegetate until the succeeding spring, it will suffer no injury from this cause.

Any one who has doubts on this subject, can plow a piece of corn stubble, and delay sowing the seed until there is a prospect that the ground is about to freeze up, when the seed should be sowed and harrowed in, or drilled in, which is preferable, and rolled if it is at all lumpy.

A very light coat of fine manure spread evenly on the surface, and harrowed in, would be the means of producing a good crop. S. Edwards Todd.

BERKSHIRE PIGS FOR SALE—
OF PURE BREED.
$5 each when six weeks old. WM. J. PETTEE,
Lakeville, Conn.
Sept. 26—w&mtf.

SOUTH-DOWN SHEEP FOR SALE.—I offer for sale a fine lot of pure bred South-Down Ewes, from 1 to 3 years old. Also Ewe and Ram Lambs, the get of a ram purchased of Sam Thorne. Price of Ewes, $8 to $12 each; Ewe Lambs, $10; Ram Lambs, $10 to $15. GEORGE HARTSHORNE,
Sept. 12—wtf. Locust Grove, Rahway, N. J.

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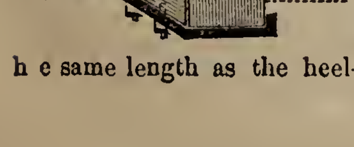
The Cultivator & Country Gentleman.

SEASONABLE SUGGESTIONS.

There are many small matters that require attention in winter. A gate not kept fastened by a good self-fastening latch, and swinging in the wind, will be more injured in a short time, than by months of legitimate use. An equal injury is sustained if the gate has sagged and the latch strikes some other part of the post. Take a mild day and attend to all of them. It is important to keep latches and hinges greased; and in order to have grease always at hand when wanted, bore an inch hole in some part of the gate-post, put in a lump of tallow, and plug it up. It is then always ready.

Every farmer knows that a gate is rapidly twisted to pieces when it has settled and has to be dragged over the ground every time it is opened and shut. The same injurious result is produced when snow drifts form an obstruction to its motion. All farm gates should therefore be so constructed as to be capable of being raised a foot or two, to avoided the snow. This raising of the gate is accomplished in various ways. One, which answers well where the amount of snow is small, is to make a screw and nut for the lower hinge, so that by turning the nut the hinge is lengthened, and the latch end of the gate raised several inches. Another way is to have two sets of holes through the hinge post, so that the hinges may be changed for summer and winter. A third is to have the gate so made as not to come within a foot and a half of the ground, sliding in a wide board into a groove in the posts whenever small animals are to be shut off. A fourth is the mode figured and described some months ago, and is here briefly repeated. The accompanying cut represents a horizontal section of the heel piece of the gate, at the hinge. The dark portion is the iron hinge, clasping this heel piece; *a*, the ring which rests on the hook in the fixed post; *b*, a triangular timber, the same length as the heel-piece, and firmly riveted to the hinge; *c*, the heel-piece, which slides up and down in the clasping portion of the hinge; *d*, timber of the gate. Wherever the gate is placed, whether high or low, in the clasping hinge, there it remains, being kept there by its weight hanging outwards against the hinges. It is lowered or depressed in a moment by merely lifting the gate enough to prevent this side weight. The lower hinge should be as much above the lower end of the heel-piece, as it is desired to raise the gate in winter.



Examine stove-pipes, and see that they are all firm and safe. Do not allow the soot to accumulate in them, so that when it gets on fire some windy night it may set the house in flames. Never allow a stove-pipe to pass near wood. Burn the soot out of chimneys at some time when the roof has been wet with rain or melting snow, by lowering a bundle of straw or two from the top, and dropping a blazing wisp upon it. Probably nine-tenths of the houses that are burned in the country are ignited by the soot taking fire when the shingles are dry, and portions of it dropping on the roof. Keeping the soot well burned out of the chimney, and all that part of the roof near it, or the whole, whitewashed with a mixture of salt and lime, would be worth more and cost less than the best insurance.

What is the reason that so many living and bed-rooms are badly ventilated in winter? One reason is, it is so hard to slide the sash up and down. See to it now, that all are made to slide comfortably and easily, and if they are not hung on pulleys by weights, provide the best and most easily working catches. A few hours time, and a few dimes of expense, may save twenty dollars in doctor's bills, to say nothing of suffering and lost time. Never allow a broken pane to remain a day.

Never allow a squeaking door—pass around once a week, if necessary, and give every hinge and latch a touch with an oiled feather.

Lay in a good supply of wood for next summer. Do not let it lie long in large sticks, but saw and split it up without delay, that it may be drying. Fresh wood quickly dried, is far more valuable than half decayed from a long retention of sap. If it can be exposed to the wind for a few weeks before housing, it will dry quite rapidly.

To winter animals profitably, remember that COMFORT is the great saver of flesh, and consequently of food. Feed regularly, that they may not fret off flesh in waiting for a delayed meal, for their stomachs are good chronometers; keep them clean, that they may not be subjected to the constant discomfort of dirt sticking in their hair and on their skins; let their quarters be warm, and especially avoid the annoyance of cold currents sweeping through cracks in boards or undersills on the windward side of barns; let the air they breathe be well ventilated, for no animal can do as well that is taking foul or dirty air into the delicate tissues of its lungs fifty thousand times every twenty-four hours, or at every inspiration. Good wholesome food is cheaper than such as is poor or mouldy. It is more economical to feed in well constructed racks and boxes, than for animals to tread their food under foot, lie upon it, or mix it with mud. Feed often, regularly, and small quantities, that the food may not become unpalatable by lying long in the animal's breath. Always have a good supply of pure water at hand in the yard. And remember the old saying that "one foot of boards [for shelter] is equal to one pound of beef."

Avoid the common error of trying to winter many animals on little food. By this error much food is consumed with no increase of growth. *A few well-fed animals will manufacture a far greater amount of flesh with the same feed*, and they will command a much readier market. We recently visited a small farmer, whose whole herd of cattle was only eight; yet we are confident that they would sell for more money than any sixteen of the herds of most of his neighbors. He never tried to see how near he could come to starving them to death without doing it, and did not attempt to feed them on moonshine and sawdust.

Save manure. As wind is to the sailor, water to the miller, steam to the manufacturer, and money to the banker, so is manure to the farmer. Draw it out and spread it in winter, and early rains will soak it into the soil, and mix it with the particles of earth better than the finest harrow, and the clay of the soil will hold all the enriching portions, as the water charged with the liquid parts flows over it.

House and arrange all tools. The following plan, described in the last Illustrated Register we have found exceedingly convenient:

A place for everything, and everything in its place, will save many hours of searching, many weary steps, and much vexation every year. The tools should not only be in the room, but every one in its place, where the hand may be always laid on it in a moment. For this purpose they should always be hung up against the wall, and be neatly arranged. Nearly every tool can be hung on a spike or pin, or between two large nails. If hung perpendicularly, they will occupy less room, and may be quickly taken down and replaced. Fig. 2 shows the manner in which the smaller tools may be thus arranged; and fig. 3 exhibits the larger tools hung on the opposite wall of the same room. In order that each tool may be always in its place, the plan devised by Townsend Sharpless of Philadelphia, is the best. Hang each tool in its position; then draw its outline accurately on the board wall with pencil or chalk; then with a brush dipped in some dark colored paint, make a distinct representation of the shape of the tool. These outlines will not only show where the tool should be put, but show at a moment if any has been left out of place. The consciousness that there is such a telltale in the tool room, will stimulate any careless laborer to return everything which he takes out.

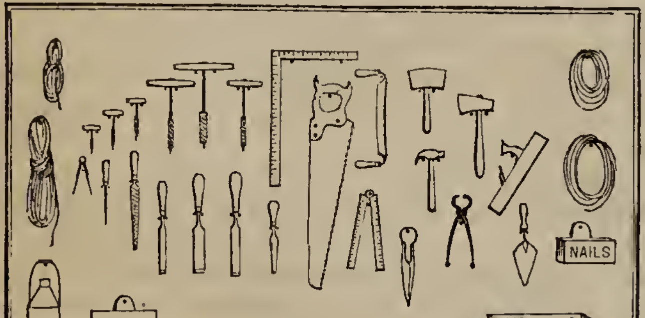


Fig. 2—Interior of Tool Room—Small Tools.

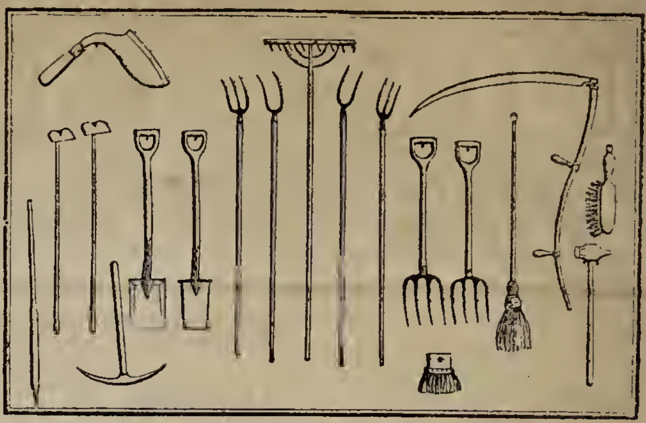


Fig. 3—Interior of Tool Room—Large Tools.

Let all broken or injured tools be repaired by the farmer if he can do it, and by the mechanic if the farmer cannot—paint such as need painting—and let all be ready for the active season on the opening of spring.

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Farming as a Business Operation.

"The farm to the farmer, is what the ship is to the merchant. To undertake agriculture without means, is like sending a ship to sea without a cargo. The profit is to use them both to their highest capacity. If the trader cannot fill a ship, he had better sell her and buy a sloop. If a farmer cannot cultivate a hundred acres, let him sell fifty and put his whole capital on the remainder, and he will find his labor lighter and his profits greater."

Every year of our experience in farming, every season's observation of the operations of those around us, convinces us of the justice of the above anonymous paragraph. It is well added that "it is not the size of the farm, but it is the intelligence, the labor, the manure that is applied, that gives the profit." The farmer with more land than he can properly cultivate, is doing as wisely in his business, as the merchant who rents a large store which he has not goods to fill, from want of capital to purchase them. The manufacturer might as well expend all his means in buildings and machinery, and then neglect to keep them in use, as the farmer buy a large farm and but partially stock and cultivate it. It is true that large farms (of a hundred acres and over) are more economically carried on when one has sufficient capital to do it; but it is also true that the small farms, as both are usually managed, pay the largest profits.

This topic has frequently been made the subject of discussion through the agricultural press, so that we do not need to extend our remarks farther. We only offer these brief hints to recall attention to the matter—as one which those interested can readily *think out* for themselves.

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The Register of Rural Affairs for 1862.—An annual adapted at once to small means and exacting tastes. It covers all the interests of the farm and garden, and is full of useful hints and tasteful suggestions. The number for the coming year is particularly valuable for its chapter on the raising of fruit, the arrangement of farm buildings, and the treatment of domestic animals. It also exhibits the first principles of agricultural botany in a simple and agreeable way. [Price 25 cents.]—*Springfield Republican.*

HOME COMFORTS.

Wealth is not essential to neatness. We have visited a large showy house, in disorder from cellar to garret—nothing neat, nothing homelike, nothing inviting; and on the other hand we have seen a low log cottage, whitewashed outside, and embowered with roses, a model of neatness and comfort inside, with its white window curtains, and every article of furniture handsomely arranged. This was owing to the presence of the excellent housewife. But while skill and labor within are so important in this great element of high civilization, namely, Home Comfort, the surroundings of the house under the care of the owner should never for a day be forgotten.

The fences should be neat, if not costly.

Boards, hoops, barrels, and boxes, should never be scattered over the yard.

The back-yard as well as the front, should be in good order.

There should be dry paths, so that neither man nor woman need step in the mud to soil shoes and defile clean floors.

If gravel nor flagging cannot be had, let a carpenter make walks of planks.

Provide a wood-house for neatness, comfort and economy.

Provide a good frame for drying clothes, so that the line need not be stretched every washing day from peach tree to hitching post, from hitching post to smoke-house, from smoke-house to gate frame, and and from gate frame to the place of beginning—with a forked stick, board and pitchfork here and there to hold up the sagging line.

Fill the wood-house with dry fuel and a supply of kindling wood—and the owner will never have to pass through a cold, smoky kitchen, nor eat sour and half baked bread.

Keep everything neat and clean about the barnyard, stables, piggery, &c., so that the "fame thereof," in the form of various odors, may not be wafted on the breeze to the house.

Remember the refining influence on a young family, of a neat garden, neat door-yard, handsome blooming shrubbery, and the healthfulness to the female members, of providing an occasional seat or arbor, where they may spend a summer afternoon in sewing or study.

It is true that these comforts cannot all be enjoyed now, in the depth of winter; but much may be done in the way of procuring them, or making preparation for them. Materials for fences may be provided; gravel or flagging drawn on sleds for walks; wood-houses comfortably filled; rubbish either removed or avoided; barns and barnyards put in order, and kept neat and exemplary; garden seats constructed, anh many other preparations made, which the farmer cannot think of stopping his summer-work to attend to.

Remember—the highest mark of civilization, is attention to domestic comforts, domestic happiness, and to elevating the condition and character of the female members of the family.

Sorghum in Illinois.—Great preparations are making for this crop next season in this section. Thousands of gallons of syrup of excellent quality have just been manufactured in this county, increasing the confidence previously felt in its value and success as a farm product, both for home use and marketing. G. *Lee Co., Ill.*

PENNSYLVANIA FARM SCHOOL.

We are indebted to Dr. Evan Pugh, President of the Farmers' High School of Pennsylvania, for a copy of its Third Annual Catalogue, just issued. We are glad to be able to present a brief outline of its affairs, and to know that they now occupy a more hopeful position than ever before.

During the past three years the Pennsylvania Farm School has been going on under circumstances of great difficulty, owing to the unfinished state of the College buildings. But an appropriation of last winter by the State Legislature of $50,000, has enabled the Trustees to advance in the work of completing the buildings, so that they will be entirely finished early next summer.

The main College building, we are told, is the largest edifice devoted to agricultural instruction in the world. It is, with the basement, six stories high, and covers an area of 19,200 square feet. It contains 165 dormitories, 10 by 18 feet square, and 9 to 11 feet high, affording ample room for 330 students. The building is also well supplied with commodious rooms for museums, scientific collections, lecture rooms and laboratories for chemical and philosophical study and experimentation.

The cost of construction is estimated at $121,000. Other property belonging to the institution, including a farm of 400 acres, makes the entire property of the school worth about $178,000.

The Farm School has been in operation for three years, and from the commencement has been well patronized. Heretofore it has been found necessary to exclude students from other States, in order to make room for those from Pennsylvania, but the enlarged capacity of the building will now allow students from all States to enter its classes.

The course of instruction is intended to be thorough in regard to the natural sciences in general, and especially so in regard to those having bearing upon agriculture. Any student having a knowledge of the ordinary elementary branches of an English education can enter its classess and graduate after a four years' course of study. The *first year* is devoted to a review and more complete study of the English branches. During the *second* the student is conducted into the elementary branches of the natural sciences, and the *third* and *fourth years* are mainly devoted to the latter. The mathematical course is about as thorough as that usually followed in other colleges, the scientific course is much more thorough than in literary colleges generally, while no attention at all is given to other languages than the English. It is the design of its friends to make the course as thorough and complete as that of the best European Agricultural Colleges, with such differences from them as the differences between American and European institutions generally require. Students who complete the course and pass satisfactory examinations and prepare dissertations approved by the Faculty, take the degree of Bachelor of Scientific and Practical Agriculture, *B. S. A.*

The college has just sent forth its first graduates, the class embracing 11 students. The Catalogue contains the titles and a general summary of the subjects of their graduating dissertations. The subjects are of an agricultural or manufacturing character, treated of with the aid of science. Artificial manures, plant ashes, slags of iron furnaces, iron ores, limestones and soils are submitted to chemical analyses, and the results given. One dissertation is devoted to the graminaceous plants in the neighborhood of the Farm School. The course combines manual labor with study. Each student performs three hours labor daily, and after three years experience the Faculty speak with full confidence as to the practicability of combining manual labor with study. All the work of the farm, garden and nursery is performed by students, all of whom are required to work; by this means the terms of admission are kept down at the very low rates of $100 per session of ten months.

The next session will open on Wednesday, the 19th of February, and close on the 18th of December following.

MANUFACTURE OF MAPLE SUGAR.

EDS. CO. GENT. AND CULTIVATOR—I would like some of your numerous correspondents to give definite directions for making maple sugar. Will you please make the request, or give the information yourselves? A. G. G. Hamilton Co., Ohio.

The first great requisite is to have all the vessels perfectly clean. Strict cleanliness should be observed throughout the whole process. Tin vessels are better than wood for this reason. If properly washed, they can never impart sourness to the sap. Made large enough to hold nine quarts each, they would cost about $35 per 100, and six-quart-pails cost $30 per 100. They may be made square or round, but the latter are better to clean and to keep their shape. They should be largest at top, so as to pack away in nests when not in use. The top should be strongly wired, like a tin pan, and a hole made under the wire enables it to hang on a nail driven into the tree, securing it thus from swine and other animals, and preventing the sap from being blown away by the wind. Old horse-shoe nails, straightened and sharpened, are the best.

The best spouts are made of thick tinned iron. When the vessels are hung as above described on nails, the spouts need not be more than three inches long. They should be widest where they enter the tree. After the sheet tin is cut up to the proper size, the concave shape is given to them by placing them between a convex and a concave piece of wood and giving them a brisk blow with a mallet. Ground sharp at the wide end, they are easily driven into a tree.

Never allow the sap to stand in the pails twenty-four hours—the fresher it is when boiled, the purer will be the sugar. While boiling, large quantities should not be poured in at a time, as that will stop it, and make irregular work; but a reservoir should be placed above the boiler, from which the sap may be drawn in a stream through a faucet, just fast enough to supply the evaporation. A little practice will enable the operator to judge how large this stream should be. Two boilers are better than one if the fire is made to pass from under one to the other—the first or hottest being chiefly for boiling down to syrup, and the second or coldest for heating the sap and doing the first evaporating. The faucet of fresh sap runs into the first, and a pipe or syphon, with faucet, conveys it to the second. Cook's patent sugar evaporator is very valuable for boiling the juice of sorghum, as it reduces the juice to molasses in less than half an hour by a continued process, and would be very useful for maple sugar, but less indispensable. It is on a principle similar to that of the two boilers above described, but more complete and perfect; the sap enters one end and flows from one side to the other many times by means of intercepting partitions, till it reaches the other end, by which time it is reduced to syrup, the proper current being given by raising or depressing the end, as the case may require.

Kettles are poor boilers—they waste fuel and make poor sugar. Shallow sheet-iron pans are much better. They may be kept cleaner, they evaporate more rapidly, make finer sugar, and effect a great saving of heat. In all cases, the boilers should be so set that a thin sheet of flame may pass under them. For example,—a sheet of flame, two inches thick, under a boiler, is as good as if a foot thick—the same amount may therefore be spread over six times the surface, and consequently be about six times more economical.

We have some good home-made pans, used for boiling sorghum successfully, made by nailing good thick sheet-iron to plank, so that the sheet-iron formed the bottom and ends, and the plank the sides—the sheet-iron was secured to the plank by two rows of closely driven nails. The pans were about 8 feet long, and four wide, and 6 inches deep. These would be cheap, and very good for making maple sugar. The fire place should of course be a little narrower than these pans. The chimney should be high enough to cause a good draught.

To make good syrup, the sap must be reduced to one twentieth or one thirtieth of its bulk, or be boiled twice as much as sorghum juice. The syrup is then to be strained through flannel, and placed aside to cool and settle 12 to 24 hours. Then return it to the pan, and to every gallon add and stir a beaten egg and a gill of milk to clarify it, keeping it carefully from boiling till the scum has risen and has been skimmed off. Then boil it carefully until it will harden, which may be known by dropping some from a spoon into cold water. When this takes place, the liquid sugar may be then poured into proper vessels, and then the cakes placed in a box to drain. To make the sugar perfectly white, lay a few thicknesses of flannel on the top of the cakes while it is draining, these flannels to be wet and washed daily with cold water—they will thus absorb and wash out the coloring matter.

A hundred good sugar maple trees will usually make in a season, from two to three hundered pounds of sugar, if well managed; and if every precaution is observed to ensure cleanliness, prevent souring, boil speedily and without burning, and to clarify properly, a larger quantity of sugar will be made, it will be more saleable, and command a higher price; or if intended for home use, the smiles of the farmer's kind wife, when she sees such a beautiful article make its appearance, will more than repay him for all the pains he has taken to secure such excellent success.

CRANBERRIES ON HIGH LAND.

The editor of the *N. E. Farmer* not long since gave his experience in the culture of cranberries "on dry, sandy loam land," full of weed seeds of various kinds. "The plants grew well enough, but the incessant pulling of weeds so often disturbed the runners that they did not have time to get a firm hold on the soil," so the plot was finally abandoned.

The experiment was then repeated on underdrained "swale" land, which before draining "would have been good corn land in a moderately dry season." The treatment and result are stated below; and we think them worth copying for the encouragement of interested readers:

"The process was to cover the rushes and meadow grass with coarse gravel, so that none of it could be seen. A little fine meadow muck, say fifteen bushels to the rod, was spread over the gravel, and the plants set about one foot apart in each direction. The plants were taken from a common cranberry meadow, and set from the middle to the last of April. The only thing done to them since has been to keep out all weeds and grass that have made their appearance; and this must be done with care, so as not to disturb the sod or plant, which was originally set, or the "runners" which have started out from it.

"On the single rod where the plants have been set *three* years, in the first week in September, we gathered *one bushel of cranberries*, and we have seen but a single lot in market that compares with them in size. On a rod set two years, *eight* quarts were gathered. These amounts were in clean, sound cranberries, with probably not an imperfect one among them, as they were gathered by hand."

HINTS ON FARM IMPROVEMENT.

Farmers are generally anxious to improve their farms, or at least to reap the results of such improvement in better crops and greater profits, but very many of them have yet to learn the most direct road to prosperous agriculture. It lies rather through careful management of abundant labor and capital, than in stinting these to the lowest possible amount—the saving is in the prudent use of every means of progress, rather than in the miserly neglect of all which *seem* to be indirect aids, but which are really the trifles which ensure that increase above the cost of production which alone counts as profit.

Let us look at one of the simplest axioms of the better farming. "There is no way," says John Johnston, "that land can be so profitably improved as by grass kept in a vigorous state of growth." To grow large crops of grass we must have rich, drained land—naturally fertile or enriched by manure and thorough culture before seeding down, and by frequent top-dressings afterwards. It must be drained land—artificially drained if subject to stagnant water—or the best grasses cannot be grown, nor can it be brought into profitable rotation with grain crops. It must be thoroughly seeded—economy in grass seed "saves at the spigot to lose at the bung," in the less quantity and poorer quality of the product. And it must not be overstocked. The best pasture land, especially while young, can be ruined by feeding too closely and unseasonably—late in autumn and early in spring time.

But farm improvement by this method requires labor and care. Autumn top-dressing comes at a busy season, and requires previous attention to provide the requisite composted manure. Hence too many neglect it, even though convinced of its importance and of the greatly increased crops which follow the practice. Our better farmers do not practice economy of *labor*, striving to get along with as *little as possible*. They have found that plenty of help for all the operations of the farm is the only way of productive and profitable farm management.

A hint or two on getting better grass from our meadows and pastures next season. Let no mild weather tempt us to allow a hoof upon them during the winter. Better buy additional forage for our stock. Where a mixture of clover prevails we should give a top-dressing of plaster in the early spring time. It has been found profitable to mix ashes with plaster for this purpose, and we should never sell a bushel of ashes from the farm, but rather buy instead. If intended for pasture, let the grass get a good start before turning on stock; the product will be much larger than when fed closely during the whole season. Low land pastures may be fed early with less loss, and especially any containing the swamp grasses. We have found it good policy to change pastures quite frequently, benefiting both the pasture and the grazing animals. Farms so situated that they may be irrigated at small expense, should enjoy this great means of enhanced productiveness. Meadows should be top-dressed with fine manure after haying—certainly whenever the crop falls below two tons per acre. If the grass land is to be plowed up for tillage another year, top-dressing in autumn will be found the best means of applying manure for the future product. But we need not extend these hints farther in this connection—we have dwelt upon them freely heretofore.

The farmer, anxious for improvement, is never at a loss for employment *upon his farm* in winter. There are a thousand things he can do to enhance the comfort and thrift of his stock, and to increase the amount and value of his manure. And it should not be forgotten that the richer and better our stock are fed, the more rapid and profitable their growth, and the far greater value their manure.

Preparations for the labors of the coming seed time can be largely made—fences, tools, seeds, and, no less important, plans for the work can be got in readiness in this time of comparative leisure. Too many are engaged off their farms at this season—in work, perhaps, bringing in more ready money—but practically of far less advantage to themselves as farmers. Others idle away the winter to grumble at bad crops and the hurry of farm life during the summer and autumn. With the new year there is room for all to "turn over a new leaf" in the volume of progress.

AGRICULTURAL SOCIETIES.

The United States Agricultural Society held its Annual Meeting at Washington, Jan. 9, re-electing President Hubbard, Secretary Poor, Treasurer French, and nearly all the old vice-presidents. The executive committee was re-organized, and consists of Marshall P. Wilder of Massachusetts, Frederick Smyth of New-Hampshire, Isaac Newton of Philadelphia, Charles B. Calvert of Maryland, Legrand Byington of Iowa, J. H. Sullivan of Ohio, and M. Myers of California. President Lincoln's commendation of the establishment of an agricultural and statistical department was warmly commended, and he was elected an honorary member. There was a decided expression of opinion against a National Exhibition, unless it can be held at Washington.

Vermont.—The Annual Meeting of the Vermont State Agricultural Society was held at Bellows Falls on the 3d inst. The President, Hon. H. Henry Baxter, being absent, Hon. Edwin Hammond of Middlebury, called the meeting to order, and after the usual reports, the following gentlemen were elected officers for the ensuing year:

President—H. Henry Baxter of Rutland.
Vice-Presidents—Edwin Hammond, Middlebury; J. W. Colburn, Springfield; Henry Keyes, Newbury; John Jackson, Brandon.
Recording and Cor. Secretary—Daniel Needham, Hartford.
Treasurer—J. W. Colburn. Springfield.
Directors—Frederick Holbrook, Brattleboro; E. B. Chase, Lyndon; H. S. Morse, Shelburne; D. R. Potter, St. Albans: Henry G. Root, Bennington; David Hill, Bridport; John Gregory, Northfield; Elijah Cleaveland, Coventry: Nathan Cushing, Woodstock; George Campbell, Westminster.

Connecticut.—The Annual Meeting of the Connecticut Agricultural Society was held at Hartford, Jan. 8. The treasurer reported a balance of $6 on hand, and an executive committee was appointed, with instructions to report next May what town presented the greatest inducements to have the Fair held in it. The old officers were re-elected as follows:—President, E. H. Hyde, 2d, of Stafford; Corresponding Secretary, Henry A. Dyer of Brooklyn; Recording Secretary, T. S. Gold of Cornwall; Treasurer, F. A. Brown of Hartford; Chemist, Prof. Johnson of Yale College.

Kentucky.—The Seventh Annual Meeting of the Kentucky State Agricultural Society, was held at Frankfort, Dec. 4th, 1861, the President, Hon. L. J. Bradford, in the chair, who was subsequently unanimously re-elected to fill the same position for the ensuing year (1862,) with the following Board:—

Vice-Presidents—1. P. Swigert, Franklin; 2. J. B. O'Bannon, Jefferson; 3. John G. Holloway.
Directors—1. O. H. Burbridge, Bourbon; Zeb. Ward, Woodford; Dr. L. P. Tarleton, Fayette; Caleb Walton, Harrison; and J. H. G. Bush, Clarke—2. G. Mallory, Jefferson; S. T. Drane, Shelby; Geo. Denny, Garrard; Alf. Allen, Breckinridge; and Felix G. Murphy, Nelson—3. John P. Campbell, sr., Christian; R. B. Ratliff, Caldwell; Edward Rumsey, Muhlenburg; R. C. Harrold, Union; and J. J. Towles, Henderson.
Treasurer—J. W. Tate, Franklin.
Secretary—Col. J. S. Wallace, Louisville.

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co., N. Y.---No. V.

Monroe County is one of the most beautiful portions of the Empire State. The climate is very salubrious; the soil usually very productive; and there are very few repulsive and undesirable localities—and even such places may be easily reclaimed by a judicious system of underdraining and a proper system of husbandry, and thus rendered very desirable and valuable for agricultural purposes. So far as my observations extended, I found it very well adapted to all kinds of fruit that will flourish well in any other county; and the numerous flourishing orchards in full bearing, and the still greater number of young ones, which are usually well cared for, and are growing rapidly, and the vast nurseries of the choicest varieties of every desirable kind of fruit trees, and vines and bushes, which are cultivated in the vicinity of Rochester, which is the county seat, and one of the most beautiful cities in Western New-York, assured us that farmers are by no means indifferent in reference to good fruit trees and good fruit. I took notes of vast numbers of objects of special interest to farmers, which I must pass by unnoticed, for want of room in the columns of the Co. Gent. But I cannot forbear to record a cordial reception and pleasant interview with D. D. T. Moore, the Editor of the extensively circulated, and ably conducted, and doubly welcomed agricultural and family periodical, about whose premises, both at his residence and office, every thing exhibited signs of order, neatness and prosperity. We called also at the office of Mr. J. Harris, Editor of the Genesee Farmer, which I have met with wherever I have visited, both in New-England and in Ohio.

Omitting details of the system of farm management at the Western House of Refuge for Juvenile Delinquents, or unruly boys—which by the way is one of the most useful institutions in the State—we pass on to the far-famed and very extensive nurseries of Messrs. Ellwanger & Barry, which occupy about 500 acres, and everything appears to be executed in real Genesee farmer style. Probably there is not another nursery in the world which equals or surpasses this Mount Hope nursery for reliable varieties of choice fruit trees and vines, and for the space which it occupies. It is truly amazing to see what vast fields are devoted to nurseries of choice fruit trees on almost every side of the "flour city." We meet with more nurseries than anything else, and the wonder is, where will they ever find a demand for so many fruit trees, vines, shrubs and flowers?

The Soil of Monroe County

Is usually remarkably fertile, and perhaps for real agricultural purposes—for carrying out successfully a good system of mixed husbandry—it is second to no county in the State, while it is far superior to many others. In some towns we meet with a reddish loam, partaking of rather an argillaceous character; while in other localities we meet with calcareous clay; and then we meet with gravelly loam, and sandy loam. In most places that I passed through, there appeared to be a sufficient quantity of lime and gypsum, or plaster, in the soil to render it a good soil for the production of wheat and coarse grain. A large proportion of the soil of this county is of such a character that it could not be improved by underdraining, as there is no necessity for it; but there are thousands of acres, which are cultivated from year to year, which do not produce half as much per acre as they would, were the surplus water carried away in underdrains. The soil of this county will produce almost anything that a good farmer desires to raise, including fruit, vegetables, grain and grass.

In many of the townships, vast quantities of Irish potatoes were formerly raised, and shipped to New-York city on the Erie canal; but since the potato disease appeared, this kind of vegetable has not been cultivated except to a very limited extent.

The Cultivation of Wheat

In the county, thirty or more years ago, was attended with remarkably good success. Indeed, wheat was *the* great staple with farmers, for many successive years. Many old farmers with whom I have conversed, have pointed out to me whole farms, here and there, and many large fields, where the yield was seldom less than forty bushels of most beautiful wheat per acre; and in many instances, the yield would be fifty bushels. But at the present time, on the same soil, the yield is expressed by any number from eight to thirty bushels per acre.

"We cannot raise wheat now, as we could once," was the oft repeated expression among old farmers; and the reason assigned, usually, was, "the insects—the wheat midge makes such ravages in the crop." Thirty or forty years ago, they had all the advantages of a most excellent virgin soil, which was as well adapted to wheat as any other crop; and had there been proper care exercised with reference to keeping the soil in a good state of fertility, by making and applying as much barn-yard manure as was practicable, there never would have been such a decrease in the number of bushels per acre, as farmers now talk of. Old farmers have told, that "here on these fields we once could raise three crops of wheat in succession, and the third would be fully equal to the first." Of course, under such a system of farm management, the most productive soil that can be found in the country, would fail to produce a remunerating crop, after so many years of hard cropping. I was assured that thirty years ago, they were sure of a good crop of wheat, even when the soil was very poorly cultivated. But, at the present time,

The Manner of Preparing the Soil for Wheat

Is very different, and costs more than double what it then did.

I alluded in a former communication, to one of the ways of preparing the soil for wheat in this county, which was by sowing or drilling in, after a crop of peas had been removed. But, I found that all progressive farmers who adopt this course, always calculate to have a good supply of rich and well-prepared barn-yard manure to apply to the soil before the wheat is put in. In some instances, the manure is hauled to the field as soon as the peas have been removed, and is plowed under, and the wheat put in as soon as it is practicable to do it after the first of September.

Another mode, which is preferred by some good farmers, is to remove the peas as early in August as practicable, and plow the ground from six to eight inches deep; and then, about the first of September, spread the manure very evenly and thin over the entire soil, and then plow it under with a gang plow, adjusted to run about four inches deep, after which the wheat is drilled in.

Another practice which is adopted more or less, is to haul the manure from the barn-yard in the former part of the season, and pile it up in the field during the summer, forking it over sometimes, in order to have it well rotted and finely pulverized; and after the ground has been plowed once with the common plow, and sometimes crossed with the gang plows, the manure is neatly spread on the surface and the ground thoroughly harrowed, by which the manure is about all covered with more or less earth near the surface of the ground.

Growing Wheat on Sod Ground

Is adopted with good success in many parts of the county, by good farmers, who assured me that as a general rule this practice returned them about as good crops—when the soil had not been greatly impoverished by injudicious management—as any other practice which they could approve.

About the first of September the sod is neatly plowed about eight inches deep, with a lap furrow, after which a roller is passed over it, when a thin coat of good barn-yard compost is spread evenly over the surface, and is either well harrowed in, or is turned under very shallowly with the gang plows, which usually cut from three to four feet in width at once through. The wheat is then put in about the fifth or tenth of September.

Growing wheat on clover lay is practiced in many instances. When the clover is in full bloom, it is turned under with the furrow about six or seven inches in depth, during the latter part of July; and if the clover is the large kind, which is considered preferable, it is not plowed in until the former part of August. Of course, circumstances will determine the most proper time for plowing it under. If the clover is pastured for several weeks in the spring, it will not have attained its full growth until after the middle of summer has passed. The soil is afterwards plowed with gang plows, sometimes twice before the seed is put in. I met with no instances in the county, where a top-dressing of barn-yard compost was applied to the soil, when a crop of clover was turned under.

The kinds of soil where these practices are mostly in vogue were where sandy and loam predominate, and some gravelly clay, with a slight mixture of clayey loam. On such soils—which seldom need any underdraining—most good farmers appeared to agree in this opinion, that they would get no better crops by plowing the soil with the common plow, the same depth of the first plowing, than they now do by simply working over a few inches in depth of the surface with gang plows.

In one of our carriage excursions we passed a large farm of about 300 acres, with large fields, where vast quantities of heavy oats were being harvested, and the soil, crops, and everything else, exhibited unmistakable signs of thrift and good management; and I was assured that the system of management which was adopted here was to manure the soil in the spring for an oat crop, and as soon as the oats were removed the soil was plowed and afterwards gang-plowed, and the wheat drilled in, and that in this way that farm had been made to pay for itself three times, and now was in a good state of fertility, and a most valuable farm for wheat or any of the cereals.

The Philosophy of Shallow Culture for Winter Grain.

When a piece of woods is cleared off and the ground simply harrowed thoroughly, without plowing, and it is sowed with winter wheat, the soil must be uncommonly wet, and the winter must be very unfavorable indeed if that wheat is much injured by freezing and thawing. And there is a very cogent and philosophical reason why winter wheat is injured less by freezing and thawing on such soil than it is on old ground.

We all know that when we set a stake or post perpendicularly in the ground about one foot deep the frost will soon heave it to the surface; but when it is set at an angle of forty or forty-five degrees, it will remain about as deep as it was originally set until it is rotten; because as the soil freezes and thaws it is lifted with and settles back with the soil.

The sod of grass ground is raised by the frost bodily, and settles back bodily when it thaws, and for this reason the roots are not all lifted out by the freezing and thawing in winter.

Now when wheat is sowed on new land that has never been plowed, the roots spread out almost horizontally on the surface of the ground, and thus form almost a complete mat, so that when the soil is expanded by freezing, it is raised bodily, roots and all, and thus it settles back, when it thaws, to its original position, without severing any of the roots of the plants. In new land that has not been plowed a large proportion of the vegetable matter and the elements of fertility are near the surface of the soil, and consequently the roots spread out horizontally much more than they do vertically. But when the soil is deep, and the vegetable matter is thoroughly incorporated with it, and when the elements of fertility are more abundant six or eight inches *below* the surface than near the surface, the roots will strike almost perpendicularly downwards. Therefore when two or three inches of the surface of the soil comes to freeze, the plants are lifted, and the roots must either give way at the lower ends, or be severed just below the frozen earth. It is easy to perceive, when such is the case, why and how readily the wheat plant is injured and thrown out by freezing and thawing in the winter or spring.

Reasoning from analogy on the subject, most good farmers in Monroe county, who have a reputation for raising the best crops of winter wheat, adopt the practice of

Manuring the Surface for Winter Wheat,

In preference to mingling the manure thoroughly with the soil, as deep as it is plowed. By plowing the soil to a good depth once, and by work only a few inches in depth of the surface—rendering it fine and mellow—and by spreading finely pulverized compost on the surface, and simply harrowing it in about the time the grain is sowed or drilled in, the roots, for the most part, will strike out horizontally, or nearly so, and will become so thoroughly interwoven with each other near the surface, that they are not drawn out at the surface, as they are when they strike down nearly vertically; but the entire soil rises and settles back in the same manner as sod ground does, without heaving out the plants.

I have made particular inquiry of those farmers who have adopted the practice of manuring on the surface, in every locality where I have travelled during the past season, and I have found that in most instances they are satisfied that winter grain will not suffer so much injury from freezing and thawing, when the manure is well rotted and spread thin on the surface, and harrowed in about the time when the grain is put in, as it will if the manure is plowed under.

This subject is a very important one to farmers in those regions where winter wheat is one of the great staples, or even where but little is raised; and I am satisfied that when our wet soils have been well underdrained, and when a good supply of compost is made for surface manuring in autumn, there will not be so many failures in winter wheat, providing the wheat midge does not injure it. S. Edwards Todd.

[For the Country Gentleman and Cultivator.]

EXPERIMENTS IN DEEP PLOWING.

The subject of deep tillage has for several years engaged the attention of many practical agriculturists, and the agricultural papers have often called the attention of their readers to it. I have reflected much on this subject, and have been gradually ganging my plow deeper and deeper till I reached the maximum depth for an able team, with a single furrow—but I did not stop here. The soil of my farm is a clayey loam resting on a tenacious subsoil; which passes off the surplus water too slowly for a healthy vegetation in a wet season.

Two years ago I bought one of Starbuck's subsoil plows, for the purpose of making an experiment in deep plowing. I operate with one pair of horses, using the Peekskill plow, No. 22, gauging it six inches for the first or sod furrow, and following this with the subsoil plow at a gauge of eight inches, making fourteen inches in all, plowing large lands, and alternating plows every round.

Last year I took a field of five acres, and plowed one-half of it as above stated, and half with the Peekskill plow alone, going twice in the same furrow at a six inch guage, making twelve inches in all. I did not perceive any difference in the crops this year, on the parts differently worked. The subsoil plow is quite narrow, and does not stir the earth as wide as the first plow cuts, nor does it bring any of its furrow to the surface.

In working with the Peekskill plow alone, I did not duplicate the furrow till after I had cut two sod furrows. The outer edge of the third sod furrow, and so the whole of the piece, falls into the deep furrows and lays, not flat, but at an angle of about forty degrees, and the second or subsoil furrow is turned over on the sod furrow, so that when the field is done it will present alternate layers of sod and subsoil furrows.

I have observed on cross-plowing land plowed as I have described, that it requires less strength of team to plow a certain depth than before. I do all my sward and subsoil plowing in the fall for two reasons. First, I have more time to do it, and the weather is cooler and better adapted for severe labor. Second, the action of the frost and winds of winter and spring, leave it in a better condition to work in the spring crop, than spring plowing. In these two ways I have cultivated thirty acres, fifteen of it the past autumn.

I have not pursued the above experiments long enough to give an opinion based on actual results. It will take several years to do it. Vegetation requires air, light, heat and water, in certain proportions, to ensure a good crop, and any excess or diminution in any of these affects the crop.

Deep plowing will aid the drainage from the surface, give a free circulation of air in the loose earth, and carry with it the warmth of the atmosphere.

The under stratum of earth thrown up by deep plowing may not be of immediate benefit. Every observing farmer has noticed that the earth thrown up from cellars and wells, is non-producing at first, but after being warmed by the sun, and fanned by the wind, loosened by the frosts of winter, and absorbing nutritious gases from the atmosphere, has become productive.

The above reasons satisfy me that deep plowing will give a deeper soil, with equal fertility of the soil moved by the ordinary depth of plowing. Nor is it reasonable to suppose that earth, that has remained since "the flood" unmoved, will in ten decades become compact and want re-subsoiling.

So far as I have experimented, I prefer to use one plow continuously, being easier for the team, less perplexing to the plowman, and more effectually stirring the earth.

While on the subject of plows, I would state that I was induced last fall to try one of Remington, Markham & Co.'s steel plows, made at Ilion. I was then plowing a piece of land that was so adhesive that the Peekskill plow would not clean, and made it laborious for my team. On taking the steel plow, the horses walked off as if eased of half their load, and the furrow left the mould-board as readily and perfectly as one could desire. I have used it in all kinds of plowing, and think they are "the" plow for any soil that adheres to an iron plow. They are strong and well made, and as good a turn to the mould board as any plow I have ever seen on exhibition at any of our State Fairs, (I have attended some of them,) and would recommend the "Steel plow" to all those farmers who have soil that will not clean from a cast-iron plow.

I hope to hear from farmers who have made or will hereafter make experiments, in deep and subsoil plowing, and the conclusion of their experiments; and I will do the same. Hiram Walker.

Oswego, Co., Dec. 16, 1861.

[For the Country Gentleman and Cultivator.]

Hints on Growing Mangel Wurtzels.

The cultivation of field beets, or mangel wurtzel, for feeding purposes, is certainly not sufficiently appreciated by farmers generally; and the quantity annually raised, (which, according to the State Census of 1855, is less than 30,000 bushels,) would seem to show that in New-York State, at least, the common estimate of these roots bears no proportion to their actual value. Compared with either carrots or turnips, (the roots most usually grown,) in respect to amount of nutrition afforded by each, mangel wurtzels will be found to be the most preferable roots; containing as correct analyses prove them to contain, from 11 to 15 per cent. of the flesh-forming principles, according to variety, the Orange Globe yielding the largest quantity, while the flesh-forming principles contained in either carrots or turnips fall considerably short of this in amount. Yet notwithstanding these facts, the mangel wurtzels continue still to be in fact, what the etymon of their name imports, viz: the "*root of scarcity.*" But in thus comparing the relative value of these different roots, I would not be understood as speaking in any way disparagingly of the less nutritious kinds; for I believe that the cultivation of *any* of them cannot *profitably* be omitted or neglected by the farmer, and should rather, therefore, commend the practice of raising all three. And this I conceive would be an eminently judicious course to pursue, as it need not be attended with the least additional labor or expense; for the required aggregate quantity would be produced in proportionably diminishing that of each. And, moreover, this would seem to be carrying out the apparent intention of nature. For turnips are more especially adapted to early feeding, nd usually deteriorate in quality as the spring advances; while the mangel wurtzels, on the contrary, are best adapted for late feeding, and uniformly improve in quality until the months of spring. Another circumstance in their favor, is, that they can be easily grown upon soils not suitable for turnip culture.

The soil most proper for field beets is a rich loam, of a clayey rather than a sandy character, and where the organic matter is fully and thoroughly decomposed and distributed through it. It should also be perfectly free from stones, and *made mellow* by deep and thorough cultivation. The subsoil plow, I take occasion here to remark, cannot be dispensed with in the cultivation of roots, but should be run at least along the line of the rows to the greatest depth practicable. I refer here to those improved plows which while they disturb and disintegrate the soil to the depth they may be run, yet do not open any furrows, and on this account they are eminently useful in marking out the rows for all cultivated crops, or those requiring the frequent use of the cultivator. Beets may be grown upon any soil containing a moderate quantity of moisture and a large quantity of nutritive matter. But on sandy soils they attain to a less size unless the season should be favorably wet or rainy. On a light soil rich in humus and moist by situation, it becomes watery and very thick; but are liable to be hollow in the middle, and are difficult to preserve in good condition. The soil should be deep and drained as thoroughly as possible, and the subsoil should not be either a stiff, cold clay, or an open stone gravel. It should be kept thoroughly pulverised during the growth of the plants.

Manuring.—As the analysis of plants has been found to furnish the best criterion for preparing manures most suitable to their growth, it may not be inappropriate to insert, in this place, the following table by Prof. Way, which exhibits with doubtless satisfactory approach to accuracy the extent to which the soil is exhausted of its elementary constituents in the production of twenty tons of bulbs, and four tons of leaves, of mangel wurtzel plants:

	lbs.
Phosphoric acid	21
Sulphuric acid,	22
Lime	21
Magnesia.	22
Potash	133
Soda.	74
Chloride of sodium (common salt,)	160

A glance at the table will readily show that ashes and salt are the essential requirements of this class of roots and should be liberally applied to the land on which they are grown. Bone dust also forms a necessary and useful adjunct to every compost designed to be applied to this, or similar crops. Barn-yard manure has been found less serviceable when newly applied for this crop, than when decomposed, and hence enables the growing plants to more rapidly appropriate its nourishing properties to their use than by the former mode.

Uses.—Beets are very suitable as food for milch cows being both succulent and nutritious—properties which greatly conduce to an increased quantity of milk, and which is all the better for being perfectly free from that bad taste so unavoidable when they are fed on turnips. Beets are also peculiarly useful for feeding to fattening cattle, though it is necessary to *use* them to it by degrees, as they eat them with such avidity as sometimes to cause danger of a serious nature. Swine will do remarkably well when fed on them. The leaves, too, should not be wasted, as stock will thrive well on them, if fed in sufficient quantities. J. M. Harper.

Oswego Co., N. Y., Dec. 9th, 1861.

[For the Country Gentleman and Cultivator.]

Osage Orange Hedges in New-Jersey.

Luther H. Tucker—When I met you at the Queens Co. Fair in Oct. last, we had some conversation respecting the Osage Orange fence. I then stated to you that I had gone into it upon a large scale, and had realized far beyond my expectations. You requested me to give you my experience in regard to that plant as suitable for a live fence. It is with much pleasure that I now can give it.

Four years ago I subdivided the whole of my farm, containing 140 acres, which required about 25,000 plants, setting them 6 inches apart. I now have in the aggregate two miles of fence which will be four years old this spring, and it is now a perfect fence against all animals. Its rapid and vigorous growth proves it admirably adapted for that purpose. The deep tendency of its roots enables it to withstand the severe drouths of our climate, and its thorns are of such a protective character as to answer every required purpose. It has no equal as a hedge plant.

There is no plant, so easy of cultivation, better or so well adapted for a protection fence on our soil and climate, as the Osage Orange. It will grow and flourish in all strong rich soils, whether they are upland, alluvial, sandy, clay, wet or dry. It proves capable of enduring the greatest extremes of heat, moisture or drouth, and the lowest temperature to which our region of New-Jersey has been subject to. There is nothing to my mind so beautiful or so secure a barrier against all animals, and for all ordinary purposes as hedging, and no country possesses a better plant than the Osage Orange.

As I required a large quantity, I found that I could procure them cheaper in Illinois than here. They cost $3.00 per 1000 plants, delivered in New-York city.

The entire cost of plants and planting did not exceed $100. The cost of taking care of it since has been the labor of one man for one month each year. It is now matured, and will only require cutting every fall. It is therefore the cheapest and best fence that has ever been adopted, and will in my opinion supersede in this quarter all other kinds of fence.

Any gentleman wishing in detail, the mode of planting and cultivating until it is matured, can call upon me at Eatontown, N. J., and see my fences, or write me and I will give them my experience in that matter.

Eatontown, N. J., Dec. 25. THOS. BELL.

[We are quite sure that the interest now taken in the Osage Orange as a Hedge Plant, is sufficiently general to warrant our asking from Mr. Bell, for publication, those details as to the modes of planting and cultivation, as illustrated in his experience, which he kindly offers to communicate by letter on the application of individual readers. The success he has attained, and the extent of his experience, are such as to give a double value to the information he can impart; and many beginners will be benefitted if he will thus allow us to publish, *as fully as possible*, the particulars of his practice. Wherever the climate is not too severe,—the risk of sudden changes and extreme cold too great—the Osage Orange must constantly grow in public favor, as other fencing material becomes more scarce. Eds.]

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[For the Country Gentleman and Cultivator.]

Farm Mills---Washing Machines--Root Cutters.

Messrs. Editors—In the April No. of The Cultivator is a notice by your respected correspondent, S. E. Todd, of Lyon and Phillip's Farm Mill. I would like to know where said mill can be procured—the price, and how to go to work to sharpen the grinding parts of it, which I conclude are of iron—when dull. If some of your readers would give their experience with the Union Washing Machine, they would greatly oblige.

Although farmers generally have neither time nor dollars to throw away, they sometimes pay too dearly for their whistles by buying implements from recommendations given by interested advertisers.

I was last winter induced from advertised recommendations, to purchase a Willard's Root Slicer, made by Nourse, Mason & Co., which utterly failed, from its flimpsy construction, to do what it was represented to do. The frame-work, where in fact no great amount of strength was required, was strong enough for an ox-cart, but the disk or cutting part, where strength was required, was only a thin plate of cast iron, perforated so near the shaft as to still weaken it. It left a part of each turnip uncut, and these pieces crowding down between the frame-work and disk, pried it off in such a manner as to crack the plates from one hole to the other, until the crack went all around the shaft, and of course rendered it useless.

Danville, C. E., Dec., 1861. A Buckwheat Farmer.

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[For the Country Gentleman and Cultivator.]

SPANISH CHESTNUTS.

I have observed by several articles in the Country Gentleman that this valuable tree, both for ornament and use, is receiving some attention, which it well deserves. Although it has been in cultivation here for many years, and is well adapted to our soil and climate, yet comparatively few persons have it growing on their lands. As has been remarked, there are a great variety of them, and the seed of the finest will no more certainly reproduce the same good qualities of size and productiveness, than will the seed of a superior apple. The only way to ensure the best kinds is to graft or bud from such as are the most desirable to propagate, which has been adopted here for many years.

There is a large tree on the farm adjoining this, belonging to Charles Jessup, from which, twenty years ago, I used to purchase a part of the crop at twenty-five cents per quart—the price usually obtained in market, to plant and raise seedlings in the nursery; but that plan has been abandoned, as it required a much longer time to obtain the fruit, and it was not reliable when produced, but few trees in a hundred yielding chestnuts in quantity and size equal to the original tree from which the seed came. Edward Harris of Moorestown, an enterprising gentleman, who has done much for the improvement of agriculture in this State, especially by introducing his fine stock of Norman horses, Diligence and Napoleon, and several brood mares, planted an orchard of twenty-four trees of seedling Spanish chestnuts, which varied in their products about as widely as the same number of apple or pear trees would have done. The greater part of them were but little if any better than common native varieties; one or two have the quality of yielding the largest sized chestnuts, and mostly three in each burr; several yield two large chestnuts and one defective, and others but one large chestnut and one or two imperfect.

The native variety is suitable for stocks, and by innoculating them from those most desirable to cultivate we not only insure the good qualities of the tree from which the scions are taken, but get the fruit much earlier than from seedlings. We frequently gather several quarts along the nursery rows in the fall from the young trees before they are removed to the orchard. Most farmers desire one or more shade trees in their pasture fields, to protect stock from the excessive heat during summer, and if care is taken to plant the best variety of Chestnut, it would not only answer for ornament and shade, but yield a crop in the fall worth $8 per bushel, and furnish the most valuable lumber for fencing or building material.

Cinnaminson, N. J. WILLIAM PARRY.

[For the Country Gentleman and Cultivator.]

St. Lawrence County---Northern New-York.

Messrs. Editors—Thinking that a few items from this section, might be of interest to your readers, I will give a few. This county is chiefly devoted to the dairy and stock business.

There are about 8000 cows in this county, and the number is constantly being increased, as most of the farmers are convinced that it is useless trying to raise grain (for sale,) in competition with the farmers of the fertile West. And the same is also true of beef cattle—our winters being so long and severe that we cannot raise cattle with anything like the profit, even when we take into account the difference in cost of transportation, that farmers in more favored localities can. I do not wish to be understood as saying that grain and cattle can not be produced at a profit, but that other branches of farming are more profitable.

Generally the average annual return per cow, in our large cheese dairies, has formerly been from 35 to 40 dollars, but at the war prices which prevailed the past season, this amount has been very sensibly reduced. Butter-making is not considered as profitable.

Many of our cheese makers, have adopted a new plan in making cheese. They place the night's milk in the cheese-vat, and in the morning skim the milk. This of course lessens the richness of the cheese, but many contend that it is not possible to so mix this cream with the morning's milk, that it will not escape with the whey. This is no doubt true.

Some of our best cheese makers have adopted another plan which obviates this difficulty. It is to heat this cream in a pail, set in a kettle of water, to about the temperature of new milk, and return it to the rest of the milk.

This county was greatly affected by the starch mania which prevailed so extensively a few years since. There is a starch factory on almost every brook and river—sometimes a half dozen within as many miles of each other. Their first cost varies from $1,200 to $2000. At present they are considered the poorest kind of property. In 1855, starch was worth from 5c. to 6c. per pound, but for the last three years it has been dull at 3 to 3½c. But few factories were run last season, and I believe none at all this season. Potatoes were worth 25c., and it was doubtful if they would pay expenses. From 8½ to 9½ lbs. is the average yield per bushel—10 lbs. is an extra yield.

This is comparatively a new county, but when its resources are all opened up, it will be the "banner" county of New-York. One very favorable feature, is the natural meadows which border all the small streams and some of the larger rivers. These are very fertile and produce undiminished crops of hay, of good quality, year after year.

There is a large tract of unimproved land for sale, in the south-east part of this county. About 30,000 acres of timbered land are offered at two dollars per acre. There is some good farming land in the tract, but its general reputation has not been such as to tempt a very great immigration.

Fruit prospects are not good. Apple trees do well for 8 to 12 years, but after that rapidly decay. But this should only be an incentive to more thorough culture and care.

Under-draining ground for orchards, has never been practiced in this section that I am aware of.

Large quantities of pork are annually raised, but at the present prices of grain and pork there cannot be much profit in the business. The only way in which we have been able to realize any profit, is to make Mr. Porker work for his board during the summer months, composting manure. But this method is not generally adopted.

Produce is very low. Wheat is worth $1, Oats 31c., Corn 55c., Rye 50c., Potatoes 25c., Hay $6, Butter 17c., Cheese 6c. There is a good deal of butter unsold yet, being held for 20c. St. Lawrence.

REFINED SORGHUM MOLASSES.

The Committee of the Illinois Horticultural Society make a satisfactory report in a late number of the Prairie Farmer, of their examination of the Chicago Sugar Refining Company, whose works, it is stated, have been erected at an expense of $60,000 for the machinery, and which will refine 100 barrels of syrup a day, in addition to its regular business (which we understand to be refining sugar.) A syrup refinery alone, they add, may be started for $12,000. The following is substantially the process:

A small quantity of lime-water is introduced at the commencement of the boiling. Next the syrup is strained through canvas sacks. Afterwards it passes into immense bone filters, containing "bone charcoal." By these three processes a great amount of extraneous vegetable matter is extracted. It is then subjected to a rapid boiling at 160° heat, in what is called a "vacuum pan," which finishes the process.

The committee think this improves the wholesomeness of the syrup—that it ranks with the best "golden syrup" in quality—that it has none of the boneset taste of the unrefined, nor the smoky flavor often observed in other refined syrups—that it is diminished one-tenth in bulk by the operation—the actual cost is not over six cents per gallon in large quantities—that the company agree to refine for ten cents per gallon, or to return 75 barrels for every 100 barrels of the crude syrup. They sell in small packages of ten gallons or more, for 55 cents per gallon.

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[For the Country Gentleman and Cultivator

FARM ACCOUNTS, DIARY, &c.

The merchant or manufacturer that should attempt to do business without keeping accounts of his income and his expenses, of his purchases and sales, would be looked upon as little better than an idiot or a madman.

Yet we believe that such accounts are to the farmer, just as important and useful, in proportion to the value at stake, as to the merchant or any other class of men. The farmer that keeps no such account, virtually gropes in the dark, as to where his income has taken itself, at the end of the year; he buys and sells, hires money and lets it, and all these various details he has to keep constantly on his own mind, while the one that keeps a careful account can readily refer to his book, and at a glance see how he stands with the world, and if he discovers a leak in his "treasury," he knows exactly where it is, and how to apply a remedy.

To those who have never kept a diary of the various operations of the farm, we can say from experience, that they will be amply repaid for all the cost and trouble they are to in keeping one. Such a diary for several years, would present such an array of useful and interesting facts, that it would be continued indefinitely.

It would tell the farmer when he commenced and ended the various operations of the farm; would note the appearance of the most prominent birds and insects; the season, whether backward as compared with previous ones, and a great many such facts, which, from their *personal associations*, would be as interesting as useful.

In those families where the "old folks have got off the notion of writing," there are young people, and let one of them be supplied with a suitable book, to be had at any book-store for a few shillings, and keep such a diary. Blending as it does, the useful with the agreeable, it will convey much useful knowledge to the youthful mind, teaching in short lessons to be repeated every day of the year, book keeping, composition, and I think I may say political economy; and as a book of reference, and in many cases as a guide, it will be of great benefit to the farmer. St. Lawrence.

St. Lawrence Co., N. Y.

[For the Country Gentleman and Cultivator.]

THE VALLEY OF THE CONNECTICUT,

FROM OLD HADLEY TO SPRINGFIELD.

The eye accustomed to the fertile and unbroken fields of Western New-York, or the wide rolling prairies of the West, is apt to look with pity upon the rocks and hills of New-England. But the sturdy son of Plymouth does not appreciate your sympathy, and reminding you of the proverb, "the nearer the bone the sweeter the meat," points with pride to his comfortable house and barns, his well appointed table, and happy household. But, if not satisfied with these evidences of prosperity, you suggest that his farm has an undue proportion of *back-bone*, he refers you and your fastidiousness to the Valley of the Connecticut, informing you that although a few loads of mother earth were once removed from his native hills, still that they were dumped in the Valley of the Connecticut, and that you will find the remainder of his land there.

Acting upon this suggestion, I determined to spend a few days searching for these lost pieces of New-England farms. My range of observation, although quite limited, still furnished an abundance of pleasure and instruction.

The Connecticut Valley has been so often and so adequately pictured, that anything by way of general description is unnecessary. From Old Hadley to Springfield, however, the wonderful combination of wild scenery and fertile plains, strikes the eye most forcibly. Old Tom and Holyoke, in their rugged grandeur, rise in bold contrast to the humble cots and blooming gardens that nestle at their base.

The soil of this section is a singular combination of sand and clay, quite different from the dark loam so often the predominant characteristic of bottom land. It forms a warm, rich soil, relieved from the heaviness of clay and the lightness of sand.

The Farm of T. G. Huntington.

About three miles north of Northampton, on the east bank of the river, you strike the farm of THEODORE G. HUNTINGTON, President of the Hampshire, Franklin and Hampden Ag. Society. Mr. H. has 40 acres, which, although generally considered a small farm, he says is all that he can manage thoroughly. He has but recently purchased the place. His house and barn are new, and his land under but partial subjection. But all his improvements exhibit intelligence and the spirit of the enlightened American agriculturist.

Mr. H. raises the Hungarian grass, which he this year sowed July 1st, at the rate of 16 quarts of seed per acre. He think that it will always be found a profitable grass, and particularly so in seasons of drouth, as it can be sown as late as June or July, when other grasses seem likely to fail.

His cattle are mostly grade Short-Horns; while his hogs are a mixture of Chester County, Suffolk, and Mackay; the Chester County giving length and side pork to the Suffolk, while the latter hides the coarse timber of the former. He has a litter of these pigs, three months old, which are very handsome.

Turning South you soon reach Old Hadley, with its celebrated meadows, its two spires, and its wide but totally deserted street. This latter peculiarity must be accounted for upon the ground, that the male portion of the inhabitants go out of their back doors in the morning with their dinners, not returning till evening; while housewives and domestics finding sufficient to occupy their minds and hands at home, have little inclination and less time for visiting their neighbors, and engaging in the pleasing recreation uncharitably called gossiping!

Leaving Old Hadley Street in its loneliness, you skirt along the Northampton meadows, the carriage road occasionally leading directly into the meadows, and then hugging the foot of Mt. Holyoke. The entire absence of fences through these extensive plains strikes the stranger as quite peculiar, but where provision is made against roving cattle, the custom is evidently a wise one—saving land, while it also adds beauty to the landscape. Entering the town of South Hadley from the north, the valley becomes very narrow, Holyoke and Tom thrusting themselves well out towards the river.

The Farm of Milo T. Smith.

Crossing the river three miles south of this point, you come to the farm of Mr. MILO T. SMITH, which contains about 250 acres, a large portion of it, however, consisting of upland, used only for grazing. Mr. S.'s most profitable crops are tobacco, potatoes, and *manure*. Tobacco throughout this section is unusually fine the present year, and at the date of my visit (Dec. 20th) was bringing from 13 to 17 cents. Mr. S. estimates the yield of his crop at very nearly one ton per acre.

His management with potatoes is as follows:

He prefers corn ground, manured the year previous. Strong manures, he thinks, produce diseased potatoes. After plowing and harrowing unmanured ground he proceeds to mark out the rows—four at a time—with one of Share's planters. In these rows he drops single pieces of cut potatoes 18 inches apart. The potatoes are covered about two inches deep with the same machine. He prefers large potatoes for seed, the yield being 25 per cent. greater than from small one. Small potatoes, he says, have the same *number* of eyes as large ones, but the sprouts lack vigor. Amount of seed per acre, 6 bushels —yield, 200 bushels. Davis' Seedlings are his favorites, the sandy loam in which he raises them relieving them apparently of the moisture which they have when cultivated upon some other soils. He has now in store 1,500 bushels.

He gives great care to increasing from year to year the size and richness of his compost heap. His stables are so arranged that all excrements, whether solid or liquid, pass immediately to the cellar below, where he keeps some half a dozen store hogs constantly employed in working it up. As an absorbent he uses sand instead of muck.

The slops from the kitchen are conveyed through an aqueduct which empties into a reservoir by the hog-pen, thus obviating much unnecessary labor.

In this cellar I noticed a Root Cutter, manufactured by Whittemore, Belcher & Co., of Chicopee Falls, Mass., in which the cylinder, having curved and sharpened teeth inserted at regular intervals, smashes directly in the hopper, instead of at *the side*, as in the Emery machine. Thus every root, of whatever size, thrown into the hopper, is bound to be cut to pieces, while with the Emery Cutter a large ruta baga cannot reach the knives, unless previously halved or quartered by a spade.

Mr. S. has also a thrifty young herd of Short-Horns, besides owning in connection with Paoli Lathrop, Esq., the celebrated bull Marmion.

The Farm of Paoli Lathrop.

I next visited the farm of the latter gentleman, PAOLI LATHROP, Esq., situated in the town of South Hadley, one mile from the village of South Hadley Falls. It consists of 105 acres, all cleared, which he purchased and settled upon 31 years ago, and which, under his management, has quadrupled in value. Upon approaching the house which stands some distance from the highway, you notice a flock of some 60 Dorkings, whose plumage vies with the snow in whiteness. His small flock of pure South-Downs are also conspicuous upon entering the grounds.

Mr. L.'s herd of Short-Horns is justly celebrated, he having, during the past 20 years, devoted such careful attention to the propagation of this breed, as to win for himself the enviable title of Prince of New-England Short-Horn breeders. Mr. L. does not join in the general complaint of hard times affecting the sale of blooded stock; on the contrary, he remarked "that he had never seen the year, that he could not sell at his own price, all the thorough-breds he had to dispose of."

In breeding he has had a special care to preserving and increasing the milking qualities of his herd. And for early maturity, docility, readiness to fatten, he considers them unequalled. In their rearing and management uniform kindness is shown them; no blows or harsh words are tolerated. If, as occasionally will happen, he has a creature naturally so depraved as not to appreciate kind treatment, and which refuses to be milked, he does not press the matter, but converts her into a nurse cow. One of these kind he showed me, which had raised he said, six calves during the last three years. He has a heifer five years old, which last September weighed 1,650 pounds, and only till recently has he put her upon high feed. Her present weight must be at least 1,800 pounds, and Mr. L. is determined to show the public what a Short-Horn can be made. His present herd consists of nineteen cows and heifers, and the bull Marmion. His yearling bull Garibaldi he has just sold and forwarded to Robert Elwell, Esq., Drewsville, New-Hampshire. Mr. L. expects soon to make extensive alterations and improvements for the accommodation of his stock.

But although so devoted to this department of agriculture, still he is not disposed to slight other matters connected with successful farming. A large portion of his farm is thoroughly tile drained, and other parts are brought under the same process as they are found to need it. His supply of fruit is abundant, while his young orchards are coming on rapidly.

Tobacco he considers his most profitable crop, and his tobacco barn, built expressly for drying the weed, is admirably adapted to this purpose.

Of the different varieties of potatoes, he prefers the Peach Blow and Jackson White.

His yield of roots this year was large, and of his carrots he kept an accurate account. From 36 rods he obtained 230 bushels, which is equal to 1,022 bushels, or (estimating a bushel of carrots to weigh 50 lbs.) 25½ tons per acre. The rows were 20 inches apart, with about three inches between individual roots.

Mr. L. is feeding to his young cattle broom-corn seed, ground with Indian corn. The seed weighs from 28 to 30 pounds per bushel, for which he pays 25 cents. He considers it excellent feed for grazing stock.

He stores from 60 to 75 tons of hay, using the "Kirby Mower and Harvester." For reaping he thinks this machine unsurpassed, although for mowing the Buckeye is the favorite throughout this section.

The snow storm of Dec. 23-4, prevented a visit to the large herd of Aryshires owned by Wm. Birnie, Esq., of Springfield, as well as to the Massasoit farm near the same city.

To Mr. Lathrop I am indebted for much valuable information and many hospitable attentions. H. W. C.

[For the Country Gentleman and Cultivator.]

THE PROMISE OF THE NORTHWEST.

Chicago, Jan. 7, 1862.

A man who has never travelled in the west knows so little about it that it is scarcely worth while to talk to him about it. He would scarcely believe a sucker if he were to tell him that Illinois has furnished a larger proportion of fighting men than any other State; and besides that he would be astonished to learn that she is preparing, with her sister States of the Northwest, to supply our country, and the rest of mankind, with sugars, syrups and cotton. Our past history has been marked by no fixed policy for making us self-sustaining in time of war. And now as war is upon us, and we are put to the necessity of devising ways and means—fortunately neither the will nor ability are wanting for this—the sudden destruction of our international commerce would have fallen much heavier upon us in one of its branches than it has or will, but for the timely introduction into the Northwest of the Sorghum, Imphee, &c. Sweets are more than luxuries. They have become a part of our food. Sugars and syrups are regarded nearly as necessary to family subsistence as flour and beef. Even in the cabins of the extreme poor you hear the want of these articles spoken of as grievances not to be endured.

The success which has attended the cultivation of Sorghum in the west is truly wonderful. The plant was introduced into France, and cultivated very extensively, twelve years ago. But either the soil and climate were ungenial, or the proper means were not employed in preparing the syrup, for it has now gone into disuse for that purpose, and is grown mostly for the manufacture of alcohol and vinegar. The first attempts at introducing it among our farmers met with distrust. They remembered the *Morus multicaulus* and other impositions of the east, and but few would give the seeds a place among their garden plants. At a fair of one of the interior counties of Iowa, four years ago, the writer saw the first sample of Sorghum syrup manufactured in that part of the State. Although spoken of with distrust until examined, very few, if any, who tasted, expressed any doubts of its success. The grey haired old man who brought it to the fair had watched its boiling with the greatest care all the night previous. He had not been incited by any award, for none was offered; but he saw in it a large and profitable branch of industry which should ultimately make the people of Iowa independent of the South in that particular. Now the county produces all the syrup used in it, and has a surplus for export.

By information from Mr. Wallace, Corresponding Secretary of Iowa State Agricultural Society, it appears that Iowa has produced the past year, seventy-six and a half per cent. of all the syrup her inhabitants will require for the year to come. The Southern part of the State has the soil, climate, and every requisite for the successful culture of Sorghum. In the north the seasons are too short, and fuel too expensive; still much is grown, and will probably continue to be for home consumption. Minnesota and Wisconsin are rather too far north; yet these States have their warm, sunny places in which sugar cane will mature. We have no exact data for the product of Illinois the past year. Many counties have grown all the syrup that will be used in them, and not a few have a portion to export. It may not be safe to set the figures so high as Mr. Wallace has for Iowa, but we may safely say our State has the past year grown one half the syrup required for the people of the State. The neighboring States of Michigan, Indiana, and Ohio, have not been unmindful of the importance of this new branch of husbandry.

Four years ago, all the sugar-cane planted in the Northwest was put out as an experiment. The juice was extracted, and boiled down as an experiment. No experiments were ever crowned with better success in such untutored hands. Nine-tenths of the Sorghum grown the following year, was commenced and carried through as experiments to satisfy the curiosity or convince the cautiousness of the experimentors. More have been astonished at their success; and the ease with which all the processes are performed, than have failed of very satisfactory results.

The fact is, there is no limit to the amount of sugar cane the Northwest can produce. We have about corn enough to last the country two years, if not an ear is grown in 1862. Farmers will plant more sparingly than for several years. Their attention will be devoted to other articles which promise better returns. Cotton will claim much attention; and it would not be strange if with our accustomed energy and tact at adaptation, we should in that branch exceed our best hopes. But the cultivation of Sorghum next year will absorb many fields heretofore devoted to corn. For instance, one farmer near Lodi, will put in 500 acres, and pledges 500 more by his immediate neighbors. The soil is good, and this one thousand acres may safely be set down as good for a quarter of a million gallons of syrup.

But we are not yet passed the period of experimenting. We do not *know how to clarify the syrup at home.* The best clarified we have seen has a taste of the extraneous vegetable matter which comes from the cane with the juice.

PUMPKINS AND APPLES FOR CATTLE.

Eds. Co. Gent.—There has much been said in regard to the value of pumpkins as food for stock. Some write in their favor, while others do not see any value in them; some saying the seeds must be taken out or they are an injury to cattle; others do not discover any harm in feeding them with the seeds. I have been amused to hear farmers who have devoted years to their calling, say that pumpkins dry up their cows; also that apples do the same if given to them; and that they are not worth gathering for that purpose.

For the purpose of ascertaining the value of pumpkins for feeding purposes, I had one yoke of oxen (7 years old) weighed about the 1st of October; also a pair of stags 3 years old, (that had just been castrated,) and a yearling steer, fed with them, as they were taken from the field, (that is ripe or green as they might be,) but as the fall was fine they were mostly ripe ones, and were nearly all gathered and housed before any frost, which I think should always be done to get the value of them. The oxen were unruly, and were fed about 2 bushels each per day, and then run loose in a large stable, and eat from a mow of wheat chaff, that was partitioned off from one side of the stable and filled when I threshed my wheat, and so fixed that they would get what they would eat without wasting. The stags were also kept in the stable, but fed hay and cornstalks, with 1½ bushels per day, and the steer had half a bushel per day and run in the pasture, except he was brought to the stable for his feed.

The result: The oxen gained 300 lbs., one stag 100 lbs., the other 120 lbs., and the steer about 100 lbs., which I think was as cheaply done as could be with meal or any other feed. The stags I have no doubt would have done much better, but they were not well when the experiment commenced, as they were put in the stable and commenced their feeding immediately after castration; they were fed without any regard to seeds, some being taken out of the best ones for seed, the rest fed as they were. Having plenty of pumpkins, some were given to two farrow cows, and they nearly doubled their milk in the months of November and December, till they were all fed out.

This year apples were too scarce to feed, but I think from some experiments that I have made, that they are at least equal to carrots in weight for feeding to neat stock, and especially to milch cows, they always gaining both in milk and flesh with me when fed on them. Apples and pumpkins should not be suffered to freeze as that injures their feeding properties very much.

Rome, Jan. 1862. JONA. TALCOTT.

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CORN AFTER BUCKWHEAT.

I planted a piece of corn last spring on land, part of which had buckwheat the year before; the remainder sward land that had been mowed but one year; and all treated alike as nearly as possible. A fair coat of manure plowed under, then a slight dressing spread on top and harrowed in. The corn was all planted at the same time, the rows running both ways, but *planted across* both parts. The result was, where the buckwheat was raised, the corn was much smaller than on the sward land, not only in the growth of stalk, but in the size and number of ears. In fact there were a great many hills on the buckwheat ground that never set an ear, while *all* on the sward part was well eared and well filled. Now what caused this very great difference? The ground was all alike, a sandy loam, and was all seeded with clover and timothy with oats, two years before, and that part that had the buckwheat was not mowed at all, but grass turned under before sowing the buckwheat. This was the second time that I have planted corn after buckwheat, and the result the same both times. I would like to understand the true reason. Brother farmers please give us your experience in this matter. E. L. Holden.

[For the Country Gentleman and Cultivator.]

Value of Cornstalks as Feed for Cattle.

Messrs. L. Tucker & Son—I find in the Country Gentleman of the 9th Jan. inst., an article on the use of cornstalks for fodder for cattle, written by my neighbor John Johnston, in which he suggests that the cutting of the stalks does not pay. Now to my mind it follows conclusively, that if it does not pay to cut them they are worth but little for food, for I think Mr. Johnston and every other farmer who has fed stalks, will agree with me that fed whole only a small portion of them are consumed; and whether the great mass can be worked easily into manure, is not so much a question with me, as whether there is not really value in that part of the stalk which the animal will not eat whole, but which he very readily consumes when cut.

Mr. Johnston says he cut corn fodder one winter for forty head of cattle and thought his labor lost. Now I would like to take every thing upon *trust* from such veteran farmers as John Johnston, but I commenced last year cutting the stalks from eight acres for twenty-seven head of cattle about the middle of November, which carried them until about the 1st of February, with two quarts of corn-meal and one quart of oat-meal mixed per day. Calling the corn 50 cents per bushel, and the oats 25 cents per bushel, which were about the prices here, the value of the meal was about four cents a day for each animal, and though Mr. Johnston did not quite approve of my entire manner of feeding, he gave me credit for doing it quite successfully; and as an evidence that my cattle were not starved, I would state that they were two and three year old steers, bought the summer before not in a high condition at all, and a majority of them sold from pasture in the early part of November last at home, for four cents per pound, live weight, to a drover who made money on them in the Albany market. I would in justice, however, add that during the latter part of the winter the feed was somewhat increased.

I commenced again last November feeding thirty-four head, such as I purchased about the country here for less than two cents a pound, (mostly of the *scallywag* order,) upon the stalks from fifteen acres,—which I expect will carry them into February,—and two quarts of corn-meal mixed with two quarts of wheat bran. Calling the corn 50 cents a bushel, and the bran 9 cents, it amounts to about three and a half cents a day per head; and upon this feed my cattle are growing every day—which fact I can make patent to Mr. Johnston, or any other person who feels interest enough in this matter to take an occasional look into my stables.

It think it is estimated that a three-year old steer will consume about one and a half tons of hay in a winter; assuming that estimate to be correct, and calling the hay eight dollars a ton, which is certainly low, it will cost twelve dollars a head to winter stock on hay.

The meal and bran we are feeding will cost about $6.80 per head for the winter, less 50 cents a head for cutting, leaving a balance to the stalk account of $5.20 per animal.

Assuming (which I think is correct,) that an acre of cornstalks, *cut*, will on an average, fed with the meal as above, carry an animal and a half through the winter, it leaves every acre of stalks worth to the farmer $7.80, which is more than I should be willing to pay for them to feed whole.

Mr. Johnston again, says he dislikes to hire cattle to eat. I have seen that argument advanced before, but it never had much weight with me, because I am confident we have all, including Mr. Johnston, been hiring ourselves, and to a certain extent our animals, to eat food that had absolute nourishment in it, which without preparation we would hardly have ventured upon. It strikes me, it won't do to say to live men of this generation, that you cannot hire cattle to eat food and thrive upon it, upon which without that preparation they would not thrive. E. Sherrill. *Geneva, Jan.* 10, 1862.

[For the Country Gentleman and Cultivator.]

CORN AND TURNIPS TOGETHER.

Messrs. Eds.—For one, I like to read in your columns, what has actually been done in the way of crops, much better than the wisest instructions as to what should be done. Therefore I was interested in L. Woodward's account of his corn and turnips together, in the Co. Gent. of Dec. 26.

I am partial to any plan of getting double crops from the same land, but I desire to get the extra crop without extra labor if I can. This item of labor is my most formidable enemy in farming. Long pay-rolls make a frightful hole in the products of 80 acres.

Mr. Woodward, to get his turnip crop with his corn, made an extra planting or seeding—nearly twice as much work as in planting the corn, for he "followed after, and put turnip seed each side of the corn, about six inches from the hill." Here were two hills dropped and covered besides the corn. Then when the plants were up, he dropped plaster and ashes on three hills instead of one. Then he cultivated twice in a row each way, "being careful not to cultivate up the turnip plants." Then he hoed, and of course was again careful, and hoed the three hills instead of one. These he cultivated twice each way again. Then "he makes a flat hill." Then he thins out the turnips plants, and transplants in vacancies.

Now suppose the labor done, although I should think both the corn and turnips would need cultivating after the transplanting stage of growth, it does not, to me, seem practicable to perform these four cultivatings with proper justice to the corn, without destroying many of the plants standing six inches from the corn. Supposing the use of land worth $7 per acre, would it not be more profitable to put this amount of labor and care on a separate crop, on other ground, leaving the corn to itself? Is not the main object of double crops, (economy,) in a measure defeated by this amount of extra labor?

Mr. Woodward certainly succeeds in getting fine crops, and perhaps finds in his case more profit than I have in a similar attempt, which I will describe; yet I prefer my system, for my extra labor is mere nothing, and my crop, big or little, is a certain gain.

My experiment was on about one acre of a three acre field of fodder corn, planted and cultivated by one machine, called the "Gage," in drills 2½ feet apart. The Gage was astride the rows in a uniform line parallel therewith. On cultivating for the last time with this machine, I got upon it myself, (as it runs on wheels without guidance.) and sitting exactly over the corn row, holding a small tin-pail of purple top turnip seed between my knees, I strewed the seed from each hand in straight lines about six inches from the corn on each side. I dropped it just astride of the line of the following knife of the machine so as to partially cover it. The machine would have dropped it more evenly, but not expecting much return I did not, for two hours work, think it worth while to put on the dropper. It came up well, and the corn was soon too big to go through, so nothing more was done to it. This two hours *ride* was *all the extra labor.*

Now for the result. The corn was very thick and heavy as a general thing, (see Co. Gent. p. 145,) a part was cut up as was intended, and fed green. Here the turnips were very large and good. The balance of the corn was left to ripen. There the turnips were smaller, but were very well worth harvesting, while the smallest left upon the ground made a good bite for the cows.

On other parts of the same field I sowed carrots and ruta bagas in the same manner, and wherever the corn was cut up green, and where it was lightly seeded or destroyed in a measure by worms or birds, the roots were *good half size*—some carrots that would weigh a pound—what our friend "Hurricane" calls, to quote from memory, "good fair sized roots."

I thought that this crop paid very well, as it had cost nothing, and I am determined to practice the system more extensively, and with slight variations another year.

As to the value of the crops thus raised with little labor, I can make no definite estimate, except in amount of feed in connection with other substances.

I had about 17 acres of other corn; on the edges of this and the head lands, I scattered flat turnip seed after cultivating. These turnips, together with those of the one acre first mentioned, and the tops of near five acres of beets, carrots and rutabagas, have kept my stock of 36 cows in full milk and thriving condition up to 23d of Dec., with a daily feed of one third bushel of brewer's grains each. Up to this date they would refuse corn stalks—cut or uncut. I commenced feeding beet tops on the 25th of October, the pasture being quite short, having had more than one cow to an acre upon it for 2 years. The tops of the field roots, lasted the 36 cows 4 weeks; and the flat turnips alone, raised as before stated, thereafter till the 23d of Dec., when the rutabagas were reached and mixed with soft turnips. There are yet perhaps 50 bushels of the latter, and yet 4 calves and 6 horses have shared in degree, this delicacy of feed. For it may as well come out here that I am too poor to raise or feed hay or oats in these times, not having had a spear of hay in my barn since last spring, and only a few oats which I am preserving as a curiosity to show my colt when he is grown up. Tape Line.

Elmira, N. Y., Dec. 26.

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[For the Country Gentleman and Cultivator.]

FARMERS' IMPLEMENTS.

Now is the time for farmers to put all their agricultural implements in order, so that no time shall be lost nor expense incurred in the spring, when time is more emphatically money than at this season of the year. If you have a good set of tools, such as saws, planes, squares, chisels, &c., you can repair many broken tools about as well as a professional mechanic.

But this is also a season to invent and make new agricultural implements. I say *invent*, because the time has not yet come when the farmer or the gardener cannot "get up" something to aid him in the cultivation of the soil, that is not to be found on sale at the stores. The most of our new and valuable implements originated in this way, or at least were invented by men who are *practical* farmers, or have been at some time of their lives.

Who is so well able to *invent* farmers' tools or implements as the farmers themselves? They have brains, and the practical ability to judge of the merits of what they construct. They may not be able to *make* an article that embraces nice work of wood, iron and steel; but they can lay their plans before the proper mechanics, and thus produce what their brains have developed in theory.

Instead of one spending his winter days in doing nothing but his "chores," and talking politics in the village stores or bar-rooms, he should be planning for the spring's work, and when it comes not find him unprepared for it. It is not the sleepy, unthinking, un-inventive farmer, who makes the most money by his vocation; but he who has the best and most perfect implements, and knows how to take care of them, when in or out of use.

Clinton, N. Y. T. B. MINER.

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[For the Country Gentleman and Cultivator.

Black English Willow for Protection.

Mr. Wesson Holton, of Willow Creek, in this county, has a hedge on the west and north sides of his orchard, which protects it well from the winds of that direction. The cuttings of this hedge have now grown three summers, and average about fifteen feet in height. They bear abundant foliage, and are ornamental, useful and profitable.

Amboy, Lee co., Ill. W. H. GARDNER.

The Bee-Keepers Department.

The Construction and Size of Bee-Hives.

The following is an extract from the very excellent chapter on the Apiary, contributed by Mr. Quinby for No. Four of the Illustrated Annual Register for the year 1858:

The Size of the Hive for all sections north of 40 deg., should be 2,000 cubic inches—south of that about 1,800. The winters are longer in a high latitude and require more stores for winter,—a large hive will secure it,—but in any section there must be room for brood combs, and not much less than 1,800 will do.

The cheapest material for hives is sound inch boards, unplaned, except at the corners, to make close joints. A suitable shape is 12 inches square inside, and 14 inches high—sticks are needed across the center inside each way, to help support the combs, and a hole for the bees to pass in the front side, one-third the way up. The top should be 15 inches square, and project half an inch over each side of the hive. Plane only the upper side; rabbet out the corner an inch wide and half an inch deep, upon which a box or cap 13 inches square inside, will exactly fit. This cap is for a cover to glass boxes, and should be 7 inches deep, and may be made of half inch boards. Through the top of the hive (fig. 1) make two rows of inch holes, about 3 inches each side of a line drawn through the center. They should be uniformly distant to match others in the bottom of glass boxes that are to fit over them. This is now ready to be nailed on the hive—stop the holes and set it away for use.

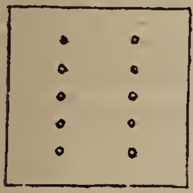

Fig. 1—Hive Top.

Two glass boxes, 12½ inches long, by 6¼ wide, (fig. 2,) are to go on the hive at once, or four, 6¼ square, may be used. For the wood part of these, (top and bottom,) thin boards are planed to one-fourth of an inch thickness, and cut to the proper length and width; through the bottom make holes to correspond with those in the top of the hive. The posts for the corners are five-eighths of an inch square, and 5 inches long. In two adjacent sides of each make a narrow groove with a saw or other tool, one-fourth of an inch deep, for the glass to fit in. Set up the box by nailing through each corner into the posts. Smaller posts may be used and the glass held by pieces of tin, if preferred. Pieces of new white comb an inch square, are fastened to the top two inches apart—it is done by dipping one edge in melted beeswax, and applied before cooling. Glass are cut the right size from panes 10 by 12, with little waste, and slipped into the channels, and the other part nailed on; it is ready for use when the condition of the stock or swarm requires it.

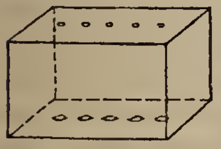

Fig. 2—Glass Box, bottom up, showing the holes in the bottom and combs in the top.

The stand is made of inch boards 15 inches wide, by two feet long, the ends nailed on pieces of wood or joists from two to four inches square, and put directly on the ground, with the hive on the back end. The advantages will balance any little trouble of keeping down grass, weeds, &c. The roof is made by nailing together two boards like a house roof, 18 by 24 inches, and laid on loosely. This can be drawn over to protect the hive (fig. 3) from the sun in hot weather, and put back to allow the direct rays of the sun to strike it in spring or other time when only moderate.

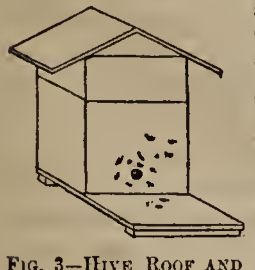

Fig. 3—Hive Roof and Stand.

In painting hives, &c., light colors are preferable.

The apiary should be protected from winds by a high board fence or buildings. When not limited for room, stands should be placed four feet apart.

Whenever the bees of old stocks are crowded outside the hive, when *that* is raised half an inch for ventilation, it is time the boxes were added, if in a season of honey. New swarms should receive the boxes a little before the hive is full, unless the honey season is too nearly over. Full boxes should be exchanged for empty ones as fast as filled.

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[For the Country Gentleman and Cultivator.]

TEST OF PURITY OF ITALIAN BEES.

Is there any test of purity of the Italian bee that can be relied on—and if so, what is it? Is it color, size, number of yellow stripes, or any or all of these combined, that is to be taken as positive proof that the genuine article is on hand? These are questions that, I have no doubt, will interest many bee-keepers who are readers of the Country Gentleman, and I propose giving the solution that I have arrived at in the course of the last two seasons, during which I have been breeding the Italian bee.

And first, what is not a test? Can a person by simply inspecting a colony of so-called Italians pronounce them pure? I answer most decidedly that he cannot. They may have certain marks or appearances about them which may lead to their being pronounced *impure* without any hesitation; but with every appearance of purity they cannot, from mere inspection, be positively said to be pure. I had a colony of bees last spring, the workers of which were as beautiful as any I ever saw. They had three yellow bands, and between every two sections of the abdomen they showed a distinct white ring, presenting a very beautiful appearance, but when I applied the test which I shall presently indicate, I found that, as regarded purity, they were worthless, and I long since gave the colony another queen. The only fault that I could at present find with these bees would be that they were a very little too large. And here the question arises as to size. How is it that previous to the importation of the Italian bee into this country it was universally described as being of a smaller size than our native bee, and yet at this day you can find many breeders of pure Italian bees who say that it is decidedly larger? My own opinion, and I give it only as an opinion, is that the description referred to was correct—that the Italian bee is somewhat smaller than the average of our native bees, and that in its smallness of size and general delicacy of appearance it shows evident signs of that long continued breeding "in-and-in" which has been a necessity in order to keep the breed pure. I have, however, discovered that a very slight cross of black blood will wonderfully increase the size of the Italian bee, and that after you have bred out almost every other sign of impurity, this increase of size will be about the last to be got rid of. And now for the test, and I by no means lay claim to its originating with me, but only that I have thoroughly proved it, and believe in its correctness.

The true test of the purity of any colony of Italian bees, is in the color of the queens you can raise from it, The great majority of the queens, say nine out of ten, or ninety per cent., or even more, must be of pure golden yellow, or yellow with a slight tinge of red in it, such as you might call red gold, in distinction from yellow gold. There should not even be many of this latter color, as it would be a suspicious symptom, and on testing them, unless they breed back to bright yellow queens, the queen that produced them should be discarded.

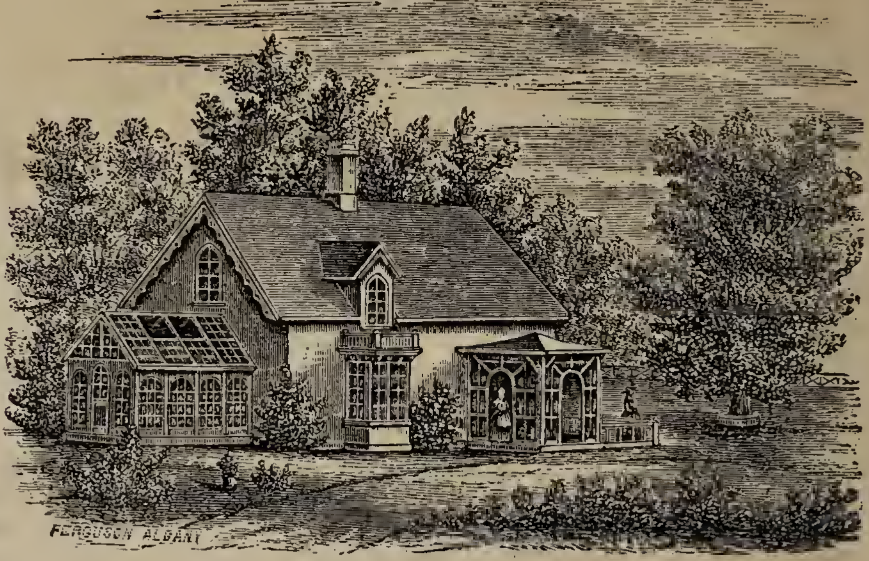
If breeders will only bear this in mind and insist on their Italian colonies producing bright yellow queens and plenty of them, the question of the size, color and marks of the pure Italian workers, will soon settle itself, because the color of the queens being an infallible test of purity, carries everything else with it; but so long as apiarans are satisfied with breeding queens of all colors from bright yellow down to a deep chestnut brown, so long will there be a never ending dispute as to what are the marks of a pure Italian worker.

The numerous experiments that I have made during the last two seasons have satisfied me that an Italian queen with only a very slight infusion of black blood in her veins, *cannot* produce *many* pure yellow queens, and therefore I take it for granted that a queen whose royal progeny are almost all dark colored cannot pure. This I think is a logical deduction from the facts. C. W. T. *Hulmeville, Pa.*

Rural Architecture.

DESIGN FOR A FARM HOUSE.

We present this design with some confidence that it will be found to meet the wants of a large class of farmers and other dwellers in the country. It is neither large nor costly. It has neither a pretentious nor a foreign aspect. It seems as though it might have grown out of the soil itself, so modestly does it harmonize with the best features of any cultivated landscape. Yet it is roomy enough for quite a large family, and every room is arranged for home, family enjoyment, rather than for show or for company. Any family which will adapt itself to the suggestions of refinement and intelligence indicated by the green-house, the bay-window and its crowning balcony, the latticed porch and the simple terrace, need never want more exciting pleasures than those always at command beneath and around the old roof tree.



Perspective View.

The accommodation provided is an entrance hall, a parlor of fair proportions, with a bay window, a glass door through which the plants in the green-house may be seen, and an alcove, which is a small recess cut off the veranda, and only separated from the parlor by an arch, and, if preferred, a fall of drapery. On its left wall a case of books, or articles of curiosity or *vertu*, may be placed; through its further wall a glass door leads upon a small private veranda, enclosed by a light balustrade; and at the right a private door gives a "favored few" access to the bed-room. The dining-room, with its closet, the kitchen, the back stairs and the pantry conclude the accommodation given on the first floor, (fig. 1.) Everything in the way of a scullery, dairy, wood-room, &c., can of course be added according to the necessities of each particular case. Four good chambers (fig. 2) are supplied in the attic, each with a closet.

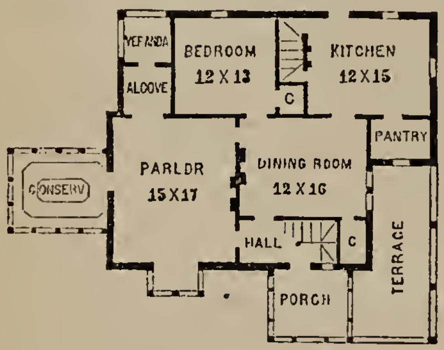


Fig. 1.—Principal Floor.

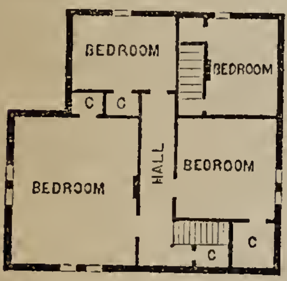


Fig. 2—Chamber Plan.

For details of the construction of the conservatory or green-house, see previous numbers of the Register, or special treatises on that subject. The cost of this house will be from $1,200 to $1,400.—*Tucker & Son's Annual Register for* 1860.

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RURAL ECONOMY---VARIOUS HINTS.

Leaky Roofs.—Where a house has been built by one or more additions the occupants are almost sure to be troubled with leaks. The easiest way to stop them is to introduce suitable cement. White lead paint, with fine sand intermixed to stiffen it according to need, answers a good purpose. Gas tar, or any kind of tar, similar stiffened, will make an excellent water-proof, frost proof application. A third, and a very good cement, is made of four pounds of rosin, a pint of linseed oil, and an ounce of red lead, to be applied hot, with a brush. Any person who knows the difference between cold, wet discomfort, and warm and dry enjoyment, should try one of these remedies for a leaky house.

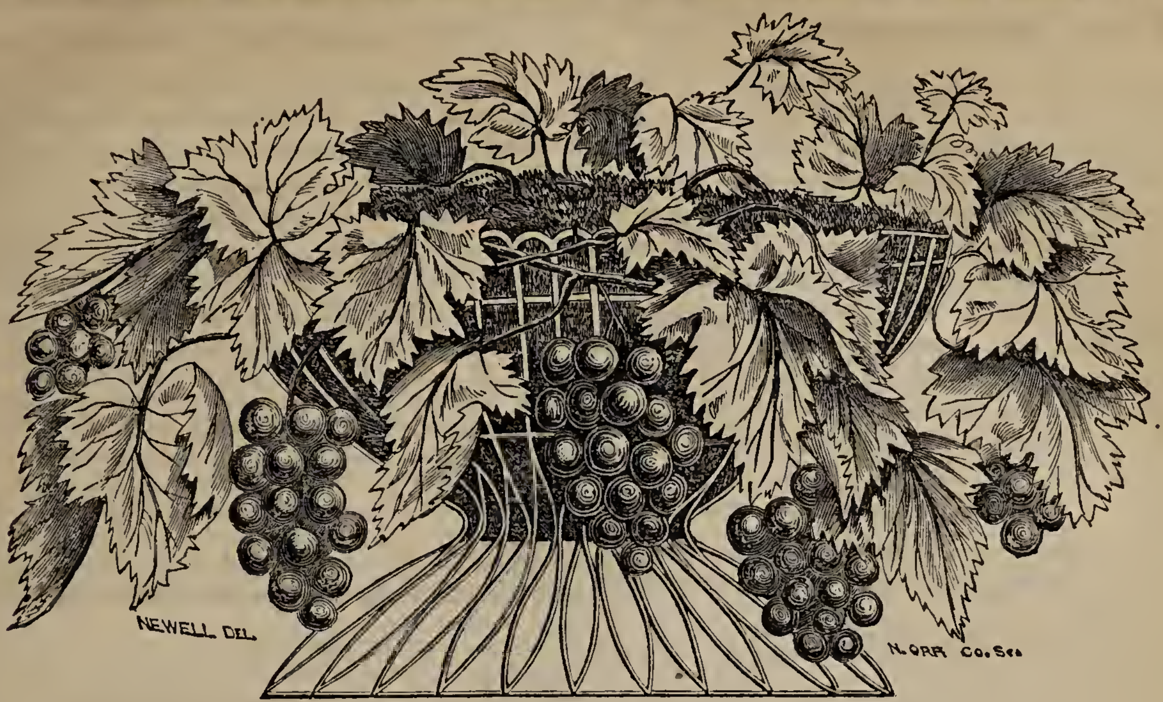
Painting.—Every farmer has several hundred dollars invested in wagons, carts, machines and implements. Now how much longer would these all last if every crack, joint and pore were always kept well filled with good oil paint? Probably on an average at least one-third longer than if not painted, and more probably at least twice as long. A great deal may be done by keeping them properly housed; but they must necessarily be more or less exposed in use: the heat opens the cracks in summer, a shower often overtakes them and soaks into these cracks. The process is again and again repeated, and decay begins. An overstrain splits them wider, or breaks certain parts. They must be patched or repaired, or new ones purchased. The farmer who has five hundred dollars thus invested might save from fifty to a hundred dollars a year by keeping a pot of paint always on hand, and on an occasional rainy or spare day go over his machines and implements, and fill with paint such as need it. The pot should have a tight cover, so as to prevent the paint drying, which may be best accomplished by using an earthen jar, with a large cork to fit it.

Every farmer should keep a vessel of *white lead* paint—the pure article. This is the best for filling in cracks or joints in small tools—it is good for abrasions on the backs of animals, from harness or yokes—it is good for the scratches in horses that have to travel muddy roads—and it is good to coat the mould-board of a plow, to prevent rust after plowing is completed.

Wedges Rebounding.—Many of our readers cut and split large wood in winter. When the logs are icy, some of them are annoyed by the wedge rebounding or flying back. Ashes dropped in will usually prevent it, but ashes are not commonly at hand in the woods. Take a piece of dry bark and set in the opening, then set in the wedge anew, so as to split this piece of bark, and it will prevent any further trouble.

Filling Ice-Houses.—A former number of the Illustrated Annual Register, gives the following very brief directions for filling ice-houses, which appear to comprise all that is essential:

1. Encase the ice in a foot of sawdust;
2. Provide ventilation above;
3. And drainage without ventilation below.


NEWELL DEL.
N. ORR Co. Sc.

PATENT MOSS BASKETS.

These have been the cause of considerable excitement among many of our gardeners through the country, many believing firmly that they were the greatest humbug of the day.

A plain statement of facts will be the best proof of what they are designed to accomplish, and the great advantages they possess over the ordinary pot culture.

These baskets are from six inches to two feet in diameter, and of a proportionate height, made of wire in the usual way. In the center of this basket is a pan containing the compound in which the various things are planted. The space between the pan and the basket and top is filled with moss, so that when complete they have the appearance of the ordinary moss basket.

When the plants are grown in soil in the usual way, they soon exhaust it, and require re potting or renewing in some shape, while by this plan the various plants are placed in just such nutriment as they require; instead of being compelled to go through the soil in search of it, they absorb it as required. This compound will last for years without any change, before it can become exhausted. The only care necessary is the watering, as is usual in the case of pot plants, but not so frequently, as the moss will retain the moisture for a long time.

As soon as the Basket of Grapes, (of which a cut is given above,) was shown to the Commissioner of the Patent Office, and a statement of the principles made a patent was at once granted.

I have a Pine apple growing in one of these baskets, which was shown at a meeting of the Brooklyn Horticultural Society, and pronounced superior to any that had been seen either in England or the West Indies; this is larger and better than any I have which are growing in pits and pots, grown according to the most approved methods. If this, the "King of Fruits," can be grown in this way so luxuriantly, surely all other kinds will succeed equally well.

I have also grown the Black Hamburgh grape in the same way, with a larger yield and finer flavor than in a grapery or in pots, one of which I presented to Mrs. Lincoln. I have also a peach tree grown in a nine-inch basket, which produced 10 large beautiful peaches of fine color and size; it is now fully set with buds for next year's crop. Strawberries now growing in a six-inch basket, in flower, partially ripe, and fully of as large size and fine color and taste, as any that can be grown during their regular season. All kinds of plants, fruits and flowers, can be grown in this way, in greater perfection, and with less care and attention than by any other method.

The prices will be made as low as possible, so as to place them within the reach of all. As soon as they are ready for sale, notice will be given through this paper.

Any further information can be obtained by calling on or writing to my agent, C. B. Miller, No. 29 Broadway, New-York. Alfred Chamberlain.

Newport, R. I., Dec., 1861.

PRODUCTIVE APPLES.

The Hawthornden apple is perhaps the most productive well known variety, especially when young. The Baldwin may stand next; young trees of the latter, five years from setting out in the orchard, very often bear a bushel or two; and sometimes at seven years, they bear three or four bushels. A young orchard, well managed, may be expected to give a hundred barrels per acre, in favorable seasons, at ten years. The Baldwin has by no means lost its popularity at the east. An extensive tree dealer in the eastern part of Massachusetts, informs us in a letter just received, that notwithstanding his efforts to mix in other varieties in orders, *four-fifths* of all the apple trees called for, are Baldwins. Among the hundreds of new sorts that are coming to light, and claiming attention, when shall we find one equal to this famous variety, or to the Rhode Island Greening.

DWARF PEARS---SUGGESTIONS

Some of our readers are aware that in some parts of the country, large numbers of dwarf pears perished last summer, in consequence of the death of the quince bottoms—the latter in all instances having evidently died first, and the pear, as a matter of necessity, because there was no supply of nourishment from below. Vigorous trees died as soon as any, and well drained land appeared to be no protection. The common opinion is that the death of the quince roots was caused in some way by the winter. Would not banking up, broad and shallow, or mulching with a few inches of manure, perhaps save the trees? Will those who have been in the practice of thus applying manure to their dwarf trees, please report the results? Let the experiment be fully tried—it is not too late to apply such a mulching of manure—it will certainly do good by enriching the soil, if nothing else. A thin sprinkling will hardly answer—it should be several inches deep.

THE GRAPES.

The Gardener's Monthly furnishes a great amount of valuable information on this class of fruit—the more interesting from the increased attention given to them—deservedly so to a fruit that bears in two or three years from planting; affords heavy crops; and is not so liable to the vicissitudes of the seasons as most other fruits—while with a little care and selection, the fresh fruit may be had nearly the season through. The Grape Growers' convention, at Lancaster, Penn., reported through its committee on one hundred sorts on their tables, mostly of the new ones which have lately attracted more or less of the public attention. We give briefly their opinions, founded on examinations of the bunches on exhibition:

Cassiday, Arrott and Matilda, are pronounced similar in character,

Rogers' Hybrid, No. 1, large, oval, brown amber, very promising.

Maxatawney—amber colored, of delicious flavor; and pronounced by the committee as the best white native grape. [Too tender and late for the north.]

Taylor—small, greenish white—excellent. [Dr. Evans, in another place highly praises it, and says it is equal to Elsinboro, but that it rambles too much.]

Anna—not fully ripe—should hang late.

Franklin—a promising wine grape. [Some of the members of the committee said it did not bear well.]

Canby's August and York Madeira are similar.

To Kalon—similar but superior to the Catawba—and ten days earlier. [Its earlier ripening gives no doubt the high color, like the dark purple of the Catawba at Cincinnati.]

Vermont Seedling—similar but not equal to the Clinton.

Union Village—"fully equal to the Isabella in quality—larger and earlier."

Williamsport—above medium, good, early, promising, hardy.

Early Amber and Northen Muscadine the same—sweet and foxy.

Raabe—cross between the Elsinboro and Bland; small berry, compact bunch, dark red, first rate quality. [S. Miller said equal to the Delaware but a poor grower.]

Merceron's Seedling—"a decided improvement on the Catawba, 2 weeks earlier, tenderer pulp."

Hyde's Eliza—similar to Isabella, and one week earlier.

The Concord was universally approved by the convention.

The Ontario, S. Miller said, needed protection, "was similar to the Union Village, but coarse and watery. The Union Village was pronounced equal to the Isabella.

The Rebecca highly commended, but some thought it a poor grower. The Diana mildews at some places.

The following vote was taken on the best six table grapes, and the three best for wine:

For Table:—	Concord,	21 votes.
	Delaware,	20
	Isabella,	16
	Diana,	15
	Rebecca,	11
	Maxatawney,	8
For Wine:—	Clinton,	8
	Catawba.	7
	Delaware,	4

The Muscat Hamburgh grape, (exotic,) is highly spoken of by the editor—not equal in quality to the old Muscat of Alexandria, but a fine setter, and large and beautiful—fine for cold vineries. A plant 15 months old furnished a bunch weighing two pounds. It had, of course, the best culture.

Blood's Seedling grape, we are informed, ripens very early, is hardy, and of vigorous stock. It is of the Fox character, but "much sweeter, has thinner skin, and not so hard a pulp"—is good for the colder parts of the country.

Mead's Seedling, is stated to be a seedling from the Catawba, superior in earliness, size and beauty. It is distinguished from the Catawba by its very long pedicels. It is said to have been entirely free from rot, when Catawba, Isabella, Clinton, &c., were badly affected.

The Catawissa grape is stated by Dr. Evans to promise value, ripening with Hartford Prolific and Northern Muscadine—is large, and thought to be equal in quality to Isabella. He also highly commends the North America, a seedling of the Franklin, much better, large as the Isabella, sweet and good, without pulp, but lacks flavor—ripening before the Hartford Prolific.

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Plants in Bay Windows.—The very neat practice of making small plant cases in bay windows (and which our readers will find handsomely figured on p. 50 of the Illustrated Annual Register for 1861,) is recommended by the editor, who states that a common oil lamp, is quite sufficient, with the usual window shutters, to keep out frost during the night or extra severe weather, while the regular day temperature of the room will suffice for that time. This is worth remembering by those who are deterred from attempting to keep house plants by the fear of their being frozen, or of the labor of maintaining a proper temperature by fire heat.

Raising Asparagus in Queens County.

When at the State Fair this year, I was very pleasantly joked about Long Island farmers buying manure by the bushel. In order to show that it *pays* to do it, I send the following statement, and for which a premium has to-day been awarded by the Queens County Ag. Society.

JOHN HAROLD.

Statement of Asparagus raised by Peter Cock, Locust Valley, Queens County.

The plot of ground contains by actual survey 7 acres and 7 53-100 rods. The ground was set out at different times, and has been cut on the average about seven years, with the exception of two acres, one of which has been cut two years, and not yet up to a successful yield; the other but one year, which was cut but a few days and consequently very little. The soil is a light sandy loam, located near the salt water; surface nearly flat. The crop is manured with New-York city stable manure, 75 loads (14 bushels) to the acre, spread on the surface in the fall, and worked in the rows in the spring. The asparagus is set in rows 4 feet apart, and 16 inches in the row, 5 inches below the surface, with roots one year from the seed. The crop is cut up and put up in bunches 4½ inches in diameter, 7 inches long, weighing 3½ pounds to the bunch, and was sold in New-York at 20 cents per bunch—40 bunches is considered a fair day's work to cut and bunch. About 1,000 bunches were lost by a severe frost the first week in May.

RECEIPTS.		
Yield from April 27th to June 18th, 10,112 bunches, sold at 20 cents per bunch,		$2,022.40
EXPENSE OF CULTIVATION.		
525 loads of manure, (14 bushels,) at 20c.,	$315.00	
Unloading and carting do., 4 teams, 7 men, 2 days,.	24.50	
Plowing and harrow'g, team and man 18 days, at $2.50,	45.00	
Harrowing, 1 horse and man 4 days, at $1.50,	6.00	
Weeding, 12 days.	9.00	
Carting to the boat,	40.00	
Wear and tear of boxes,	10.00	
Cutting and bunching, 253 days at 75c.,	189.75	
Freight, ½c. per bunch,..	50.56	
		695.81
Balance in faver of crop,		$1,326.59

This statement was accompanied with the surveyor's and two other affidavits relating to measuring the ground, gathering and carrying to market. One thousand three hundred and twenty-six dollars and fifty-nine cents profit from a little over seven acres, is not so bad, even if the manure was bought by the bushel. J. H.

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Honey Locust and Yellow Locust.

Messrs. L. Tucker & Son—The seeds of these trees grow as readily as Indian corn, by adopting this simple process: At night pour boiling water on the seed and leave it till morning; then pick out the swollen seeds, and renew the hot water application to the balance, and continue this process till all are swollen. Plant the seeds about half an inch beneath the surface of the soil.

N. B. Both these species produce abundance of seeds on this island. Wm. R. Prince.

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[For the Country Gentleman and Cultivator.]

To Prevent Rabbits from Barking Fruit Trees.

Catch one of them, and cut "him" into about four pieces! Then take a piece in each hand, and rub your trees with the fleshy part, up as high as they can reach, and you will not be plagued with them any more. Should the winter prove long and severe, it would be well enough to give the trees an additional rubbing in the latter part of the season. Geo. H. Willson. *Olney, Ill.*

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Grafting the Grape.—A writer in the Germantown Telegraph recommends grafting the Delaware grape on the roots of other grapes, both on account of its greater scarcity, and to cause a strong and rapid growth, and states that he has been as successful as in grafting any thing else, by performing the operation in spring, in March or April, "like any other grafting," taking care to set the graft low down or on the root.

Fruit-Growers' Society of Western New-York.

The winter meeting of this vigorous association met at Rochester on the 8th and 9th. The Supreme Court room was densely crowded with interested members and listeners. The tables were handsomely filled with choice collections of winter fruits—Ellwanger & Barry, as usual, contributing the chief portion of the exhibition, and furnishing 58 dishes of as many sorts of winter pears, mostly of very fine growth, and a large portion in fine eating condition, as the members proved satisfactorily on the occasion. The same establishment also furnished an excellent selection of some 50 varieties of winter apples.

The Officers elected for the year, were—

President—H. T. BROOKS of Wyoming.

Vice-Presidents—J. J. Thomas of Cayuga, Wm. B. Smith of Onondaga, W. R. Coppock of Erie.

Secretary—C. P. Bissell of Rochester.

Treasurer—W. P. Townsend of Lockport.

Executive Committee—P. Barry, J. J. Thomas, C. L. Hoag, W. B. Smith, Joseph Frost.

In consideration of his indefatigable labors, the Secretary, C. P. Bissell, was unanimously elected a member for life.

Among the subjects for discussion was the best

Mode of Training Apple Trees.

Mr. Sharp of Lockport, preferred trees branching near the ground—such branches were stouter, and supported the load of fruit better than the weaker branches which come out higher up. B. Fish agreed with this opinion that branches near the ground were less liable to bend down. H. E. Hooker thought the best form for an apple tree was not yet decided, but must vary with the growth of each variety. The Spy and English Russet grow quite upright—the Rhode Island Greening is crooked and spreading—the Baldwin is a medium and a model. These must be differently treated. The King is spreading, and thin, and if the inside were thinned out, as is practiced with the Spy, little would be left; the tree would be spoiled. Trees will preserve their distinctive shape, and cannot be made to grow in other forms. P. Barry said there was a diversity of opinion as to the height of nursery apple trees; some wanted them two feet up to the branches, others four feet, and others again six feet. He prefers about four or five feet, at the most, or rather low-headed, which gives them some important advantages. The sap does not have to travel so far to the head—the branches are stronger, they are less exposed to the winds, the tree is less liable to accidents—tall stems are often injured by the bark being burnt by the sun and killed by exposure—low-branched trees on the other hand are generally healthy. Tall trees bend from the prevailing winds, and the higher they are pruned the more they lean in one direction. Low heads are more easily pruned; tall ones require a long ladder, and the operator has to lay hold or hop around like a monkey to accomplish his work, and it is then badly done. Many prefer trees so tall that horses may pass under them in cultivation—he did not agree with this opinion, but would do the cultivating and top-dressing by hand.

E. Moody of Lockport, thought we would have to come to some general principle of orchard cultivation to suit farmers, and he saw no objection to cultivating with the plow. He preferred low-headed trees. In pruning, he accommodated his practice to the particular mode of growth of each variety—in the Greening, for instance, he would remove the more horizontal branches, and retain the upright; the Northern Spy, on the contrary, he would keep of open head by taking out the upright shoots. When heads are trained high, he finds the sun to injure the south side of such slightly tender kinds as Rhode Island Greening and Roxbury Russet. Dr. Beadle of Canada West, had seen trees pruned up with heads seven or eight feet high, and when some twelve years old and about five feet in diameter, the bark had been killed from top to bottom, by the scalding effect of the sun's rays, apparently after severe freezing. He had never seen low-headed trees thus injured. He alluded to the common objection that teams could not be driven under such branches with a wagon, and even with a load of hay, but did not know what business a farmer has to drive such loads under them. He had observed tall trees bent from the northwest winds, and whole orchards with their arms thus apparently reaching forward in an easterly direction. He did not approve of plowing the roots, and thought no plow should ever be in an orchard, but the roots allowed to run near the surface. He thought that low branches partake of the nature of the trunk, and are stiffer and less liable to be bent down than high limbs.

H. E. Hooker said that the advocates of low pruning exclusively, urged extreme cases in defence of their views, and did not allow any medium. In order to avoid one extreme, it is not necessary to run into the other—nor to speak of trees trimmed up 10 or 12 feet high. He prefers about five feet. Farmers could not be induced to fork up the soil of their trees by hand—they must use the plow, especially those who raise fruit largely for market. An orchard must be cultivated to do well, but this will not be done, unless by horse power. E. Moody cultivated his orchard by the use of the plow and cultivator, with the horse attached to a short, round-end whipple-tree, the rod being fastened to one side of the beam so as to throw the plow to one side, and by this means he can run quite near the tree, and in fact cuts away all the grass or sod. He has a fine orchard, kept mellow with the plow. Unless horse power could be admitted, the cultivation of orchards would be entirely neglected. W. B. Smith thought that Mr. Barry's mode of hand and surface culture best adapted to dwarfs, where horses could not be used to advantage after the trees come into bearing. But the owners of large orchards cannot think of forking up the soil by hand. The plowing need not be done very near the tree, where it might injure the roots. P. Barry said he thought *farmers* should do the work as well as others—they should do things right as well as amateurs and gardeners. He recommended horse cultivation when the trees were young, but as they became larger, the plow should not pass so near, but manure, ashes, and forking will finish up the work near the tree, well and clean.

A member inquired for experiments, and not theorizing to show the relative advantages of plowing orchards and merely stirring a thin surface, or top dressing—he doubted whether all the mutilation the roots received would produce so bad a result as a want of a good depth of mellow surface. Dr. Sylvester of Lyons, said he had been induced to change his views on this subject by witnessing such an experiment. He thought the most desirable point was to have a shaded trunk; but we must plow and cultivate. The branches should allow the horses to pass under—he had an experienced mare that had learned to "make her manners" to every low tree, and by passing alternately right and left, or on each side of the row, he can plow nearly the whole surface. He uses a short whipple-tree with rounded ends covered with carpet, to prevent bruising the bark. He has ten acres in orchard, one part in sod, top dressed yearly with manure, and the other plowed "clear up to the trees." The former do not grow quite so thriftily, although nearly so; but the fruit is inferior in quality and less in quantity than on the plowed portion.

Mr. Sharp of Lockport, had provided himself with two small mules, in order that the cultivating might be well done under his low headed trees, and if these animals prove too large, he intends to get a team of jackasses for this service.

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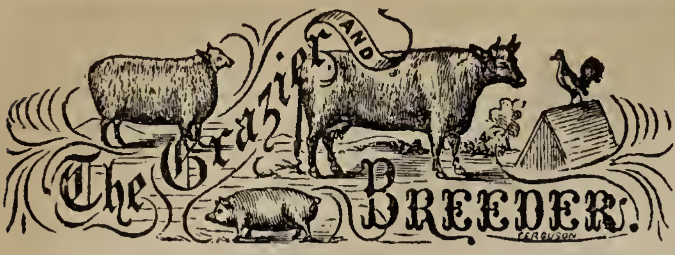
Caterpillars.—A quoted writer says, "I took a pan, large and flat, filled it with burning charcoal, and placed it under a tree—then added a pint of rosin, and two ounces of sulphur. The fumes scattered the worms."


The Grazier and BREEDER.

[For the Country Gentleman and Cultivator.]

STOCK FARMING IN OHIO.

How Indian Corn is Converted into Beef and Pork in the Scioto Valley—Cattle and Pig Feeding on Wholesale Principles.

Messrs. Editors.—As much has been written for your and kindred journals East, of late, about the benefits and *necessities* of cutting coarse feed, and cooking or steaming grains for cattle, hogs, &c., I have thought a description of our *wholesale*, uncut and unground system of stock-feeding, &c., might not prove uninteresting or unprofitable to those who advocate "cutting and steaming," as the *always desideratum*, and that they might *relax* their tenacious views somewhat, by having a few *facts* and figures for comparison.

As our county of Madison is situate in the heart of the great Scioto Valley Region, noted for its cattle, hogs, corn and grazing, I propose to select this county as a sample of the whole, and first, from statistics, show *in part* what are our capacities and what we produce.

First—We have of taxable lands 286,771 acres, with a population (1860) of a trifle over 13,000.

Second—Our savannas are divided into larger farms—and *more* large farms—than any other county in Ohio, there being 45 (1858) men owning over 640 acres each—many having 2,000 to 3,000, and some ranging up to 5,000 and even 8,000 acres each.

Third—We had in 1858, 21,587 head of neat stock on which we paid taxes, at a valuation of $544,300, or an average per head of $25.21 each, which includes all kinds and ages over six months. This was far ahead of the valuation of any other county in the State.

Fourth—We had same year, 29,847 head of hogs, valued at $106,836.

Fifth—To grow and mature these cattle and hogs, we had our grazing lands and (estimated in 1858,) 16,057 tons of hay, also 33,043 acres of corn, making 1,143,046 bushels.

Our farms averaging large, it of course requires a correspondingly large number of the various animals to stock them and consume their productions. Barns to hold these grasses and cereals, with their rough feed accompaniaments, are out of the question, as all will honestly admit.

Permit me to explain *how* we feed our hogs and cattle, as briefly as may be explicable.

First—The hogs, if designed to fatten, are allowed a clover range by our best farmers, during summer, throwing them as much old corn as will be eaten clean, until August. By this time rye or oats are sufficiently matured to turn into. This is accomplished as follows: Temporary fences are constructed, "cutting off" from three to five acres, on which the hogs are placed—when nearly consumed, an additional three to five acre lot is struck off, the fat hogs placed in the *new piece*, while in the *first* lot are placed a few young pigs, (or shoats as we term them,) to glean all scattering grains. In this way none is lost. By the time the small grains are used up, the new early corn is ripened sufficiently, and in the same manner as above, small pieces are "fenced off," the stock hogs following the larger ones. This we of the West term "hogging down."

This method has many advantages; some of the most prominent I will specify: First—One or two men, a few hours each day, three to six days, to remove fence and inclose a new "patch," is all the manual labor required to fatten the hogs while eating corn by this plan. Second—The animals are never stinted, being changed so soon as the supply begins to grow scarce. Third—By frequent changes the ground is not injured by packing, and the hogs are kept from making the ground muddy by removals. Fourth—All that is grown upon the soil is *immediately* replaced without labor, by the stalks and manure, leaving the soil in good condition for succeeding crops. Fifth—Nothing is lost. The young hogs thrive well on the leavings of the fattenings, and from one to one and a half pounds of pork is thus economically made upon each hog per day, at a far less expense of time and trouble than if cooked and steamed feed were used, both of which are utterly impossible when feeding large numbers.

But enough of this "hog talk" for the present, and let us look at the neat animals and *how* they are fattened *without* steamed or chopped feed. First—cattle are generally kept in pastures summer and winter, being fed, during the latter, hay from stack, or corn fodder from husked corn, until three years old, (though some fatten their neat stock the winter after they are two years old.) At this age they are placed in "feed pens" from the first to middle of November. *Two* of these pens, of from two to five acres in extent, are selected on the highest, dryest, poorest parts of the farm, as contiguous to corn to be fed out, as possible—which is taken from shocks 12 hills square—144 hills to shock, or stook—generally, not to exceed 100 head to each lot. It is of course understood that the cattle have had good grazing during summer, and are presumed to be fat when going into lots.

Good feeders allow from 15 to 25 days to bring the cattle up to "full feed," as we term it—that is, we begin with, say two shocks, twice each day, and gradually increase it, (to prevent any from foundering or becoming cloyed), until they have all that will be eaten. The tops and blades of fodder supplies all *rough* food needed, and the corn puts on the desirable flesh. When "on full feed," they will pass much corn, whole, with manure.

Your Eastern husbandman will exclaim, right off, "Oh what poor economy!" But please do not pass judgment too hastily. Let me explain how we manage to have this all turned to good account and saved. I stated previously that *two* feeding lots were prepared. In one of these are kept—to every 100 head of cattle—150 stock hogs, that will weigh at beginning of feeding season, from 60 to 75 or 100 pounds gross. After the cattle have eaten in lot No. 1, all the corn they wish, the hogs are turned in to pick up all these *manurial* corn droppings, and any left by cattle uneaten.

At the evening feeding, the corn is first scattered in lot No. 2—the cattle are then let in—the hogs remaining in No. 1 until cattle are through—then changed as before, and so on. The stalks uneaten, soon form a dry bed, to keep feed out of mud, and the oxen to "feed-waggon" keep this semi-daily round without a driver. In this way one man, with three or four yokes of oxen, will easily feed 100 head of cattle, this being the number usually allowed as one man's work.

It is expected that each steer, if full fed—that is, full until grass is ready to turn upon in spring, will consume about 60 bushels of corn. The feeding season lasts from 1st to middle of Nov. until 1st of April if an early spring, but often to last of April, or 1st of May. But at the same time, the 60 bushels for steer will also fatten one and a half hogs to each steer. The hogs usually increase during a full feeping term from 100 to 150 or even 200 pounds—in other words, say the shoat at beginning weighs 75 to 100 pounds, at the close, he will be ready for market, and go off with cattle, fat, grossing from 225 pounds to 250 or 300 pounds.

Ohio sends annually to New-York market, large numbers of fat cattle and hogs—(from the Tribune report in 1858, fully one-fourth of all sold there of the former, came from Ohio.) In 1858 there were shipped, east, from Cleveland, Ohio, 124,046 head; the same year we are reported to furnish New-York market 53,652 head—quite large numbers of the remaining shipment went to Albany and Brighton, and the remainder were taken by New-York feeders and graziers, and eventually were marketed as from that State. In 1858 this State furnished 688 more than Illinois, and 22,682 head more than your State.

Many of our feeders fatten on corn 100 to 300 head, and oftentimes double these numbers of neat stock each year, and from 300 to 500, and one of my neighbors the present year 1,000 head of hogs. That it is *impossible* and *impracticable*—neither economic—to cut, or grind, or steam food for *either*, when fed on such a scale, *all* will admit.

The candid reader who will review our system, must admit that our losses of grain are comparatively nominal; by the *mixed* system of hogs to follow cattle, they not only *save* the droppings and what cattle tramp into mud, but also accumulate fat themselves in a corresponding ratio with the neat animals. Thus we are enabled to "kill two birds with one stone," to use a homely phrase, and also consume our grain profitably and economically, at a small outlay of manual labor. But were it even possible, with barns, hands and machines, to cut the corn-fodder, (which is our main rough feed for cattle and sheep,) it would be labor in vain so far as stock eating it is concerned. Our corn is planted, not in drills, but in rows *both* ways, averaging about 3½ feet between hills each way. The cornstalks attain a height of 12 to 15 or more feet—I have seen many fields in which one-fourth of the ears were so high from the ground, that a tall man could not "hang his hat on the ears" from the ground. These stalks, where cut off when shocking, are from 1½ to 2 inches or more in diameter, and when dried out are almost as hard as wood; true, there is much sugar in them, as is in proof from grinding, having seen an excellent syrup made from these before the advent of sorghum. Yet if cut up, nothing could or *would* eat them to any amount. We use them for manure, and that is the most that could be made of them even if cut.

And here let me digress again, to inquire of those who sow or drill corn for feed *only*, how they are enabled to cure it without moulding? I have tried it both ways—in drills, thick, and sown three bushels to the acre, but but was unable to do anything with it except to cut and feed immediately out to milch cows or sheep—could not succeed in drying it sufficiently to prevent moulding when placed in stack or barn. If any of your readers have been successful in preventing this by curing, I should be much pleased to have the *modus operandi* through your columns.

But to return and close. Labor at the West is so high, and working men so scarce, that we find it is our most *economic* course that brings us the most *actual* returns. In your, and other older eastern States, where labor is cheaper and farms smaller, with suitable barns to accomodate both feed and stock, the cutting and steaming, with ground grains, will perhaps prove most economical; but that we of the West are to be benefited by the adoption of such systems for many years to come, admits of a doubt; nay, is *wholly* and entirely *impracticable.*

Hickory Grove, London, Madison Co., O. "W."

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[For the Country Gentleman and Cultivator.]

Bots---Prevention Better than Cure.

In the winter of 1850, I was passing through Vermont, and stopped for the night at an old farmer's by the name of David Ruggles. The next morning one of my horses was suffering severely from an attack of the bots. A large dose of sage tea, made very strong, and sweetened with molasses, caused them to relax their hold, and I was soon enabled to pursue my journey. Before doing so my host informed me that he kept salt and ashes constantly before his horses, and said he thought it was a sure preventive.

Thinking it worthy of trial, upon my arrival home I rigged a box in each of my stalls, and put salt and ashes in equal proportion in them. Since then I have had a great many different horses, but have not had occasion to doctor for bots. Of course, I am not *certain* that the above prevented the bots, but I have no doubts on the subject. St. Lawrence.

TO AVOID RUNNING OUT OF HAY.

Every farmer naturally has an aversion to running out of hay in spring before grass comes. No one desires to buy that which he ought to have raised, to keep his cattle from starving; and the only alternative, when short of fodder, namely, placing them on short allowance, is still worse. The farmer should know before he enters winter, whether he has enough feed for all his domestic animals.

To ascertain this, many resort to past experience, determining as nearly as they can, by guess—often by a very vague kind of guessing. Those who have kept careful record of the number of tons consumed by a given head of cattle, or a certain number of horses, may determine more nearly. Where the cattle and horses have been weighed, and the aggregate weight of the herd thus determined, the estimate may be made with considerable accuracy. Some animals eat more than others for the same weight; a greater difference is occasioned by the severity or mildness of the weather, or the degree of shelter given from the cold; but as a general rule, a horse should have three per cent of his weight daily in food (hay or grain,) and cattle, which digest better, two and a half per cent. If the farmer has ascertained the number of tons of fodder he has deposited in his barn, he may now, if he understands arithmetic, determine pretty nearly, how his hay is likely to run, before grass time.

If he has no record of the amount of his hay, he may determine, very nearly, by measuring. First, by finding the length, breadth, and depth of the hay, he at once knows the number of cubic feet. Good solid timothy, the average of a bay 12 or 15 feet deep, will weigh a ton to about 500 cubic feet. If the hay is clover, it will require 600 or 650 for a ton; and if the hay is only 5 or 6 feet deep, add one-sixth more.

After determining the number of tons, and the whole weight of all his animals, he may at once know if he has enough. The result will, however, be considerably modified by causes which he has more or less at his control. Regularity in feeding will have its influence; good feeding-racks will prevent much waste; and comfortable shelter will save many tons to every large herd. A skillful farmer informed us, that formerly when he had just erected a fine new barn, with ample shelter of the best kind, he had learned, as he thought, according to his usual estimate, that he would have to buy hay to complete the wintering of his animals; but on trying his new sheds and stables, so great was the saving actually effected, that he had several tons the next spring to spare.

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[For the Cultivator and Country Gentleman.]

Which Variety of Swine is Best.

Most people admit that in all but size, the Suffolk combines the most desirable qualities, being white, very quiet, small consumers, will fatten at any age, and give more lard and first quality meat, in proportion to gross weight, than any other variety.

That there need be no lack of size, has been demonstrated, and was again shown last week by Mr. S. Whedon of this town, who slaughtered a Suffolk hog which weighed 608 pounds, after hanging 24 hours in a freezing atmosphere. This hog was bred from a dam descended from stock imported by S. W. Jewett, Esq, Vt., and his sire was bred by the Messrs. Stickney of Boston, from parents which had taken prizes at the show of the Royal Agricultural Society in England. E. Marks.

Camillus, N. Y., Dec., 1861.

The Dairy Department.

CHEESE PER COW.

Mr. E. P. Haynes of Barre, Mass, who owns a farm of 260 acres, mostly rough and rocky but excellent for grass and pasturing, writes to the Country Gentleman, that he keeps twenty-four cows and about fifteen head of oxen and young cattle; and that he last year (1860) made 15,600 lbs. of Cheese from 23 cows and 1 two-year old heifer, besides fatting and raising several calves. This would give an average of 650 lbs. per cow—certainly a good yield. Mr. Haynes, we are pleased to learn, is improving his cattle. He is the owner of the Short-horn bull "Judge Haliburton," out of Rump 2d, sired by Monarch (718,) and has recently purchased heifer and bull calves of the same breed, with good pedigrees.

Profits of Cheese, Butter, and Milk.

Can you, or some of the readers of the Co. Gent., inform me which would be the most profitable, to a man having a dairy that will yield 100 quarts of good milk per day, through the summer season, to make butter at 18 cents per pound, or cheese at 6 cents per pound, or to sell the milk at 2½ cents per quart when milked.

Deerfield, Mass. C. D.

A good cow, well fed, will make some 200 lbs. of butter, and 6 or 700 lbs. of cheese yearly. The relative quantity of each will differ considerably with the cow, kind of feed, management, skill in manufacture, &c. The same animal will give about 2,500 quarts of milk, if properly fed—which at 2½ cents per quart would be over sixty dollars, or fifty per cent. more than the butter or cheese at the prices stated, besides avoiding the labor of making them. It is not unusual for good cows, from the first pasture till harvest, to give sixteen quarts a day, or 112 quarts of milk per week—which at 2 cents per quart would be $2.24 per week. More than 11 pounds of butter, at 20 cents per pound, would be required to yield this sum. Hence the greater profits of selling milk, when there is a market, are obvious.

Letter from a Pennsylvania Butter Maker.

Dr. Elwyn of Philadelphia, kindly furnishes for *The Country Gentleman*, the following Letter from a Dairy Farmer of long and extensive experience:—

Philadelphia, 1st mo. 2nd, 1862.

Esteemed Friend—Having been requested by thee to write out a statement of the process of making good butter, I have to observe that good *cows* and rich pasturage—natural grasses—green grass and white clover, are the essential basis, together with cleanliness and proper management.

The proper management, as I conceive, would be to skim the milk at all times within thirty-six hours after being milked; and in order to effect this, a small quantity of sour milk should be put into each pan at the straining of the milk. The judgment of the dairy-manager should regulate the quantity according to the state of the atmosphere. When the cream is skimmed into the cream-pot, it should be stirred morning and evening until churned, which should be done every three days during the warm weather, and all the year if the quantity of cream would warrant it. After the butter is broken in the churn to the size of chestnuts, the milk should be drawn off from the vent-hole, through a fine sieve, and then a sufficient quantity of cold water put in the churn and tumbled a few times—drawn off as before—more water put in, and tumbled again. The water should then be all drawn off, and the butter will then lay in a mass in the churn, which should be cut promiscuously about, for the purpose of receiving the salt, which should be a full pint for fifty pounds, and the same proportion for less or more. The butter should then be tumbled in the churn sufficiently to mix the salt. It should then be taken out of the churn and lumped into pounds as nearly as possible, and sponged, weighed, and printed. A sponge of proper size, enclosed in a coarse linen cloth, should be pressed on each lump until all the brine is extracted, before being weighed.

The most particular part of the process, is attention to the skimming and management of the cream, to prevent rancidity from taking place before churning, for if the cream is bad, the butter must necessarily be bad.

To Doctor A. L. Elwyn. HOMER EACHUS.

A CHENANGO COUNTY DAIRY.

We acknowledged last Autumn the receipt of a very superior tub of Butter from John Shattuck, Esq., of Chenango County. Mr. S. has since kindly furnished, in response to our request, the following statement as to the production of his Dairy during the past season. Before giving it, we may remark that the sample of Butter sent us by Mr. S., was pronounced remarkable for sweetness and excellence by all who tried it; and, what is a point worth noticing, it was salted with the "Factory filled" Dairy Salt of Syracuse, which Mr. S. considers *equal to the Ashton for butter.* That his butter is none the worse for it, is evidenced not only by our own personal test, but also by the fact that his dairy was sold last Autumn for 23 cts. per pound in New-York, while his Spring butter, which was sent to market at a time when the prices were almost at their lowest point, netted him something over 17 cents. Mr. Shattuck says:—

The number of cows I have milked this season was 23, up to Nov. 1st, when two were sold. I find by reference to my memorandum, that the first tub was filled March 30th. I have kept no account of the time the cows came in, but from memory I should say mostly in the month of April, some in May, and one or two quite the last of the latter month.

Total amount of butter made	5,130 lbs.
do. do. do. sold,	4,846 do.
Leaving amount used in family, and on hand,	284 do.
Total average per cow,	223 do.
Total amount of sales of Dairy 4,204 lbs., at 23 cts..	$966.92
Spring and late fall butter sent to New-York, 642 lbs., total amount, ..	111.94
Total amount used and on hand, 284 lbs., at 23 cts.,	65.32
Fourteen deacon skins, sold at four shillings,	7.00
Nine calves raised on skimmed milk	35.00
Value of pork raised from Dairy slops,	100.00
Total amount,	$1,286.18

Which gives $55.92 to each cow; and taking out what we have used, leaves $53.08 actual sales to each cow.

No allowance is made for milk and cream used in family, which has consisted of eight persons most of the time during the season. I received the first premium on butter at Oxford Fair, 1861.

If I were to say any thing in regard to dairying, I would advise most farmers to keep *fewer cows, and keep them better.* The longer I dairy it, the more thoroughly I am convinced that a less number of cows would yield a much better profit than over stocking does. The truth is that every cow should be kept so as to yield her utmost quantity of milk in order to get the largest profit; and in order to do that, they must have all the feed they want, and that of good quality during the milking season.

I think one important thing in the care of cows, is in keeping them sheltered in the cold fall rains and frosty nights. And a few roots fed whilst changing from grass to hay, helps to keep up the quantity of milk very much. I would recommend in the dairy districts a more thorough attention to the breeding of stock with reference to their milking qualities, which I think might be greatly improved. If we desire and expect a choice herd of cows, we must breed with special reference to the points and qualities we wish to develop. John Shattuck.

Near Norwich, Dec. 30, 1861.

Domestic Economy and Cookery.

[For the Country Gentleman and Cultivator.]

Directions for Making Yeast and Good Bread.

Editors Co. Gent.—All housekeepers who desire to make good bread have only to follow the receipt given below to secure that happy result. I have tested the matter, and *know* that there is no humbug; and all the extra trouble about it is more than balanced by the superior quality of the article produced. Firstly:

To Make Yeast.

Take two handfuls of hops, 3 pints of water, 6 potatoes, and boil them all until the potatoes are soft; then pare them, mash through a cullender and strain the liquid. Put it in your preserving kettle over the fire, and add 1 cup of sugar, 1 tablespoonful of salt, and 1 of ginger; add flour enough to make it of the consistency of paste, and then let it boil five minutes, stirring it all the time. Turn out, and when partially cool add half a pint of good yeast. Let this stand till fermentation takes place, and the job is done. In the winter I keep it in a stone jar in the cellar; but in the summer I dry it by mixing it with corn meal, and spreading it on the table exposed to the air, (not sun.) Secondly:

To Make Bread.

Wash and pare 24 good potatees; boil them with a large handful of salt till reduced to a fine pulp; strain through a cullender, add 3 pints of sweet milk, and when cool enough to bear your hand in it, stir in enough flour to make it a thick batter; to this sponge add a coffee cup of the yeast, making the sponge at night. In the morning I add *six* quarts of new or sweet milk, and 3 gills of lime-water, and knead it into a stiff dough. In two or three hours after kneading it will be as light and porous as honey comb; knead it down, and after it has again risen, mould it and put it into pans. Let it stand till it rises again; then wash the loaves over with cold water—this prevents the formation of too hard a crust—and bake in a well heated oven. When baked, wash again, wrapping it closely in your bread cloth. Give this a fair trial, and I will warrant satisfaction.

Merrillsville, Mich. H. W. H.

[For the Country Gentleman and Cultivator.]

To Remove Slivers from the Eye.

Editors of Country Gent.—The following bit of surgery I learned many years since, from a skillful surgeon, a Scotchman, who hailed from Edinburgh. I have never seen it in print, but think it ought to be so, as both simple and safe in its operations:

To remove from the eye a sliver that adheres closely—such as one from stone, steel or iron, prepare a goose-quill, by cutting as for making a pen, leaving the lower end narrow and long. Bevel this strip on its inside, from its centre, so as to form sharp edges at the outside of the quill. Bend this quill bevelled side in, in the form of a bow. Keep the bow in form by tying with a thread the two parts of the quill that meet.

Let the patient recline on his back. Apply a scissors-bow over the eye, holding with the left hand and pressing sufficiently to keep the eye from rolling in its socket. Then, with the other hand, place the extreme point of the quill-bow on the eye—one of its edges near the sliver, then press upon the quill. The eye will *dent*, that is, give way under the bow. Then lean the quill in the direction towards the sliver, so that the bow may scrape the eye. Then move the quill *steadily* in the direction of the sliver, hitching its edge under, and raising it from the eye.

The advantage of the above method of operating with the quill, instead of the knife or lancet, (which are often used,) is, that there is not the least danger of cutting the eye, because the quill does not contain sufficient hardness, combined with its strength, to carry a cutting edge. As one instance of the efficacy of the above method, I will mention a case that occurred some twenty years since, under my own observation. A plane maker received in his eye a sliver of steel, from the plane-iron. A skillful physician tried to remove it, using his lancet, but gave up the attempt, saying there was danger of destroying the eye by cutting; that the eye would soon fester and the sliver come out of itself. The use of the simple quill, immediately thereafter, removed the sliver, and relieved the patient. Amos Fish.

Bethlehem, N. Y.

[For the Country Gentleman and Cultivator.]

HOW TO MAKE CIDER WINE.

Messrs. Editors—One of your correspondents in the Country Gentleman for Dec. 5th, asked for a receipt for making cider wine, and I have thought that the following might be just what he wants:

Put your new cider into clean casks or barrels, and allow it to ferment from one to three weeks, according as the weather is cool or warm. When it has attained to lively fermentation, add to each gallon three-fourths of a pound of white sugar, and let the whole ferment again until it possesses nearly the brisk pleasant taste which it is desirable should be permanent. Pour out a quart of the cider and mix with it one quarter of an ounce of sulphite of lime for every gallon the cask contains. Stir until it is intimately mixed, and pour the emulsion into the liquid. Agitate the contents of the cask thoroughly for a few moments, then let it rest, that the cider may settle. Fermentation will be arrested at once, and will not be resumed. It may be bottled in the course of a few weeks, or it may be allowed to remain in the cask and used on draught. If bottled, it will become a sparkling cider—better than what is called champagne wine.

Boscawen, N. H. JOHN C. GITCHELL.

[For the Country Gentleman and Cultivator.]

Union Washing Machine and Universal Clothes-Wringer.

Messrs. Editors—A writer in the Country Gentleman of Dec. 26, asks for the experience of any one who may have used the Union washing-machine. Having used it to our perfect satisfaction, during the past eight months, in doing the washing for a farmer's family of nine persons, we feel authorized in saying that no one, after a short trial, would be willing to dispense with so invaluable an aid to the labors of washing-day as this machine affords. We procured it from the manufacturer, at a distance of over two hundred miles, from a notice we saw in the Country Gentleman, feeling sure that any recommendation under the sanction of its Editors, would be reliable, and we are more than satisfied with the result. It possesses many advantages over all other machines (of which there are a great variety,) used in this vicinity. We have never used any other, but a woman who washes for us and for many other families, says she decidedly prefers the Union to any other kind she meets with in her rounds.

We have lately procured the "Universal Clothes-Wringer," from the same recommendation, and have found it fully to answer the advertisement, that "it would wring anything from a collar to a bed-quilt." We feel sure that should your correspondent procure either or both of these machines, he would feel that his money was well expended. P.

Manchester, Vt., Dec. 26, 1861.

RECIPE FOR CORN BREAD.

The Agriculturist recently offered prizes for Corn Bread. The competition was large and four premiums were awarded. The sample taking the first premium came from Mr. James O'Brien, Carrick, Pa., who says that it was made according to the following directions: To two quarts of meal add one pint of bread sponge; water sufficiently to wet the whole; add half a pint of flour, and a tablespoonful of salt; let it rise then knead well for the second time, and place the dough in the oven, and allow it to bake an hour and a half.

THE CULTIVATOR.

ALBANY, N. Y., FEBRUARY, 1862.

☞ The price at which The Cultivator furnished is *so exceedingly low*, in comparison with the contents it offers from month to month, that even in these times, we cannot resist the temptation to urge its claims upon *every practical farmer*. It is not yet too late for much to be done in extending its circulation. We earnestly hope that those who have already enrolled themselves upon its lists, will endeavor to procure a few more subscribers among their friends; *additions to clubs are always received at club rates*, and the papers sent to different post offices if desired.

And may we not also hope to renew our monthly intercourse with many of our former friends? We mean that the present volume shall be equally as interesting and valuable as any that has ever preceded it, and to make it compare favorably in both respects, with other periodicals published at *twice the price*. We cannot do this without a sacrifice on our part; and we therefore think we may fairly call upon all energetic and enterprising supporters of Agricultural Improvement, to lend a helping hand by devoting a few hours, the first pleasant leisure day, to canvassing for The Cultivator and Register among their neighbors.

☞ In answer to many inquiries, we desire to say that the Annual Register of Rural Affairs has now been published *eight years*, and that either of the back numbers from the beginning may be had post-paid for 25 cents. Their contents are of permanent value, and the back numbers are consequently in constant demand. Complete sets of the eight numbers are sent post-paid for $1.60, and *contain altogether about Twelve Hundred Engravings!* To those who already have the Number for 1862, we will send the seven previous numbers for $1.40.

☞ A cheap but very comprehensive Agricultural Library, fully indexed, touching upon nearly every topic of interest to the Farmer or Fruit-grower, and comprising also a quite complete history of the agricultural progress of the past Nine years, may be had in the *Third Series of* The Cultivator, including the Nine Volumes from 1853 to 1861. They are sent to any part of the Country (by express or otherwise, at the expense of the purchaser) for seventy-five cents each, well and neatly bound in muslin, or by mail post paid at $1 each. Having lately reprinted missing numbers we call the attention of new subscribers, or of old subscribers whose sets are incomplete, to the convenience and usefulness of having the bound volumes, by the purchase of which (at $6.75 for the set) *nearly thirty-five hundred closely printed, double-column pages* are obtained. For private libraries, or for those of Farmer's Clubs, District Schools, and other public institutions, they present equal attractions.

☞ The great thing, after all, in any pursuit, is a determination to excel and to succeed. And in the comparison so often urged between Farming and other occupations, if we were to take into account the degree of close application, unwearying thought, and eager ambition not to be "the hindmost," manifested respectively in the City and in the Country,—we should perhaps gain as correct a key as any, to the reason why the former should apparently contain more instances of energetic and profitable industry than the latter. To provoke the Farmer's ambition, to lead to more enlarged and careful thought, and greater mental application, is perhaps the first and chief use of all our Agricultural periodicals and societies.

It is a recent letter from our old friend John Johnston, which has suggested the above paragraph. Although intended exclusively for our own eye, he will pardon our calling the attention of our readers, and of young farmers especially, to the illustration it affords of what has just been said. Those who have been acquainted with Mr. J.'s previous history will remember that he took a clay farm when a young man, which no one expected he could make a living on, and that, with Scotch pertinacity, combined possibly with some American go-ahead-ativeness, he has drained and tilled and manured it into a prominent rank among the most productive farms in the State. Having retired from active farming two or three years ago, we thought he had permanently exchanged his out-door labors for those of the pen and tongue, in answering the frequent calls upon him for suggestions and advice, and in imparting to others in retirement the benefit of his experience in the field.

But our friend appears to find sitting at the desk more irksome than standing at the plow handles; and, if he should not now actually undertake the latter in person, he has determined to "try it again" by deputy. With two pair of work horses to a hundred acres, he means to show that his right hand has not yet by any means forgotten its cunning in practice, as well as in counsel; and he promises with the leave of Providence that we shall eventually hear of better crops on the old farm than it has ever raised before. "I have my plans laid," he writes, "if I am spared for a few years, to harvest a good crop of winter wheat in 1863; farmers *ought to look ahead* several years, to raise good crops—that is, young and middle-aged farmers, and I cannot help looking ahead, although an old one."

Forecast, energy, perseverance—what can they not accomplish? Upon a miscellaneous page of this number, will be found examples from that interesting work of Mr. Smiles, "Self-Help," of "Men who have Risen;" and their biographies if we were to consult them, would show what these qualities can be made to accomplish against discouragements and obstacles. Something of the same spirit ought of right to be infused among our farmers; it is in this spirit that their successes are only won.

☞ An esteemed subscriber of Canada West, whose name has been on our books for many years, in recently sending his annual list for 1862, speaks very kindly of the good results which have been apparent from the reading of our Journals, and adds, as a part of the argument he has employed in obtaining subscribers for them:—"The information collected from the many able correspondents of The Cultivator and Country Gentleman; the frequent visits of the editors to different parts of the United States and Europe, their close inspection of the best cultivated farms, together with the intelligence given by the proprietors of the best cultivated farms as regards their manner of cultivation, the convenience of their buildings, and various other agricultural information when published by the editors of these Journals, all combine to afford a most valuable fund of instruction to the agriculturist, rarely to be found in any other periodical of the kind."

☞ Our correspondent, Mr. D. A. A. Nichols, late of Westfield, in this State, has, we see, removed to Springfield, Ohio, and become one of the editors of the Springfield Daily News.

☞ Annual meeting of the New-York State Agricultural Society will be held in this city on the second Wednesday of this month.

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☞ There are two or three things which it is pleasant to find characterizing the history and condition of an Agricultural Society. We propose to allude to them very briefly—the text of our remarks being now before us, in the shape of recent publications emanating from County Societies in our sister State of Massachusetts,—those of "Essex" and "Hampden" which we have heretofore acknowledged, and of "Hampshire, Franklin and Hampden," which last has just come to hand from the president of the Society, T. G. Huntington, Esq.

1. The first pleasant feature in a Society to which we wish to refer, is one which Time alone can give, but the attainment of which, mismanagement, mutual jealousies, or local quarrels, can very certainly prevent, viz., a healthy *old age.* The Hampshire, Franklin and Hampden Society has now issued its *forty-third annual report.* During that period it has had but 13 Presidents, the terms of service of the first twelve having averaged over three years each, while the present presiding Officer is now entering upon his fourth year in the Chair. All this seems to us to indicate a general co-operation and unanimity of feeling, a high appreciation of the importance of such associations, and a willingness on the part of individuals to labor in earnest for the common good.

2. It is also a good sign when the State does its part towards the encouragement of Agricultural Societies. Massachusetts appropriates *six hundred dollars a year* for each of her twenty-five Societies—the condition of the grant being that the society claiming it shall raise a permanent invested fund of at least $3,000; so that a good *working capital* on which to act, is an essential pre-requisite,—a thing in itself increasing a Society's power of doing good, and at the same time tending to keep up the active interest of its members, and to give a permanent character to their proceedings.

3. *A full treasury* is always a matter of convenience both to persons and societies. The three associations above referred to report as follows:—

	Real Estate.	Personal Property.	Debt.	Receipts 1861.
H., F., and Hampden,..	$4,450	$4,000	$1,000	$3,620.07
Essex,..................	......	8,912	......	2,416.13
Hampden, ...	32,153	553	9,400	1,932.01

And we find by turning to Mr. Secretary Flint's Report for 1860, that the 25 Societies of the State had then a total permanent fund of $197,212, being an average of nearly eight thousand dollars each, and that their gross receipts that year were $65,600.

4. The publication of a *Society's Transactions,* is, provisionally, a good thing—*provisionally,* because the propriety of publication depends both upon the matter and the manner, and especially upon the former. A newspaper will publish the premiums that are awarded, if the Committee reports are to contain, as is too often the case, nothing but the bare mention of the successful names; and if the address comes from some political gentleman, perhaps the newspaper is as well for that also; but, if a part of the committee-men, at least, will take the pains to make out instructive and readable reports, and if, when the nature of the case admits, the competitors present full and accurate statements as to the production of the article exhibited, and if the address comes either from a farmer in person, or from some one who has made either the science or the practice of agriculture a theme of careful study or observation,—then the materials are at hand for a neat pamphlet which will prove the existence of *a live Society,* and which will be worth more to its exchequer than the cost of neatly printing it, if the contents are really valuable, in the increased pecuniary support it will attract.

In all the different respects referred to, we note the general excellence of many of the local Agricultural Societies of Massachusetts. Think of the interest that must attach to a complete set for forty or fifty years, of the annual publications of such a Society, presenting an epitome, as it would, of the course and progress of Agriculture during that time, embalming the names of the best farmers for the contemplation of their descendants, and not too bulky to be contained upon a single library shelf.

The system adopted by the Societies whose books we have before us, has been to obtain by memberships and subscriptions a certain permanent fund, the interest of which is annually drawn—the price of membership (for life) being generally five dollars for each male member, and two or two and a half dollars for females. The memberships required to make up the original capital will probably include the principal farmers of the county, but the additions obtained each year may amount, nevertheless, to from one to two or three hundred dollars, efforts for extension, of course, being always "in order." Thus a man, once a member is always a member, and if, as some Societies do, the Transactions each year contain a complete list of members, there is great pride felt on the part of every thriving farmer, that others shall not see his name omitted in this *index* to the intelligent and enterprising of his vicinity. And there can be no danger, as is occasionally the case under the system of dollar memberships commonly in vogue with us, of any clique or person's *paying the way* to offices by making members to out vote all opposition; or rather, (for we believe that the foregoing is rather a *supposable* case, than one that ever really occurs,) there must be very much less danger that any particular clique or locality should obtain a monopoly of the Society, to the exclusion, whether it be voluntary or not, of others, possessing equal rights and equal capacity, from a fair share in its honors and its control.

— We have referred thus at length to the above topics, not necessarily as advocating any fundamental changes in our own systems; but because, in the direction of our Societies, not less than in the management of our farms, we believe, as was remarked two or three weeks ago, that we may profitably examine into the systems pursued in other states—the interchange of information as to the best plans of organization for permanence and good service, having in a great degree ceased, as the Societies of each State have grown up one after another, in imitation of those in their immediate locality.

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☞ We note that Mr. Daniel McMullen, of Scotch Mountain, Delaware Co., who has been successfully employing the Ayrshires for Dairy purposes, if we are not mistaken, for a number of years past, has lately added to his Ayrshire herd, by the purchase from Clark I. Hayes, Esq., of Unadilla, of "Dandy 7th" and "Maggie," both valuable animals and coming from good stock.

A Christmas List.—*C. P. B.*, in sending from Otsego Co., a Twenty Dollar list of Subscribers for Co. Gent. and Register, under date of Dec. 25th, more than half of them new ones, says he takes that method of expressing his opinion that the Co. Gent. is "the best Agricultural paper in America." He could not show his sincerity in a more kindly or appreciative way.

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Goodrich's Seedling Potatoes.—An experiment with several varieties of C. E. Goodrich's seedling potatoes, resulted satisfactorily. The Rusty Coat Pink-eye, Garnet Chili, and Cuzco, yielded well, and I think will prove valuable sorts. The produce of four tubers of the last named, was two bushels of good sized potatoes. I want to give them more attention the coming season.

Woodbury, N. J., Dec. 27. W. W. G.

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Pumpkins.—As I see you sometimes record cases of remarkable productiveness in agriculture, I will state that last season I raised in common field culture, from one seed, twenty-four common field pumpkins, all of which got ripe, and weighed three hundred and twenty-four pounds, averaging thirteen and a half pounds each.

Alton, R. I. W. F. SEGAR.

☞ Since the efforts made by ARTHUR YOUNG, more than half a century ago, to arrive at a tolerably correct estimate of the productiveness of England in grain and meat, every thoughtful friend of Agricultural improvement, has been anxious to arrive at some method of annually collecting clear and accurate statistics of the purposes to which the land is devoted, and the degree of success with which these purposes are attained. But not to the farmer alone is this information calculated to be useful; there is no class among merchants and manufacturers whose interests it does not intimately concern, and to the political economist it would open a new field of important investigation.

All this has been fully conceded, and the only difficulty appears to have been in devising means of obtaining it, entirely free from public or private objections. It has been recently proposed in England to place the matter in the hands of the local Police throughout the country; but public opinion has seemed quite averse to allowing these gentry to intermeddle with the affairs of individuals to that extent. In Scotland the Highland and Agricultural Society has tried the experiment of collecting agricultural statistics through its agents and correspondents; and, for several years, quite successfully, until, unfortunately, there arose disputes and an inexplicable quarrel which effectually quashed farther proceedings. In Ireland Agricultural Statistics are now taken, and we believe very satisfactorily, through the agency of the constabulary force.

We are reminded of the subject just now, partly because it has been much discussed of late in our Foreign Journals, and partly because the present week witnesses the gathering of our State Legislature, whose attention is very likely to be called to the passage of a law to secure the collection of Agricultural Statistics. It is much to be hoped that such a law will be enacted. Hon. EZRA CORNELL, of Tompkins County, an Executive Officer of our State Agricultural Society, will be able to speak in the House from experience; since, as our readers are already aware, he voluntarily undertook last year to obtain the required statistics throughout his own County, for the sake of testing the matter, proving its entire feasibility, and placing an example before other Counties. These statistics have been noticed in the COUNTRY GENTLEMAN at length, and will be found in the State Society's Transactions for 1860, just published.

Mr. CORNELL's plan of obtaining Agricultural Statistics, is to have no larger area than a single School District placed under the charge of a single collector. This divides the labor among so many that the share of each is almost insignificant, and great accuracy may be thus secured. It is suggested that the Teacher of the School should be called upon to do it; and that, until done, the school moneys of the district should not be payable by the State—moneys for which the State now receives no direct return, but which would thus be made, at a cost to the teacher of two or three evenings' labor in copying out the returns received, a channel of immediate public benefit. Through the children, he could send blanks to nearly or quite every farmer in his district, and receive them by the same source when filled out; regarding the communications of each person, if so desired, as strictly confidential, and only allowing the aggregates to go forth to the public.

Another suggestion, coming from one of Mr. CORNELL's assistants in gathering the statistics of Tompkins county last year, who expended two or three days in going about through the school district for the purpose,—is that the farmers be invited to assemble on some appointed evening at the school house, bringing memoranda of the facts desired; and that they devote the evening, after completing the forms furnished for the district, to mutual intercourse and discussion. This is certainly a simple and practicable idea, tending, if properly carried out, to promote good feeling and a useful interchange of sentiments, as well as securing the object primarily sought; and many a teacher would take pleasure in thus bringing together the parents of his charge, who on their part might find the results of the meeting of so agreeable and profitable a kind as to desire its occasional repetition throughout the winter, simply as a sort of informal Farmers' Club.

There is but one word, which should be added in conclusion: If the measure is to be proposed, and *to be carried through*, the project must be simplified to as great an extent as possible. Let us have the columns of figures placed at a small number at the outset, only covering the most important facts, in order that the blanks may be easily understood at a glance, and that those who may have to fill them out, shall have no discouragement in their apparent intricacy and no excuse for carelessness in the quantity of the details requested. It will be easier, when a simple and perhaps quite incomplete system is once under way, to perfect it by degrees, adding a column for this, one year, and for that, another,—than to give birth to a Minerva ready-mailed from head to foot. Or to change the figure, let us be satisfied if we can launch our boat, and when she is once fairly on the water, we can take our own time in putting in the more delicate parts of her machinery.

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AN INVITATION TO BE ACCEPTED IF POSSIBLE.—*L. S.*, of Orange County, in sending his welcome annual List for THE CULTIVATOR, remarks:—"You must grant me my request that I made last year, not to act as your agent any longer unless you will do as you are doing in other places —show yourself in this part of the country and help us who have been striving to keep up an interest in farming improvements. I hope you will think favorably of my proposal, and I will try to make your visit as agreeable as possible on my part." Nothing will please us more, if time and circumstances will admit.

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HEDGES.—Much has been written by practical and theoretical experimentors, on hedge plants. Among the number of practical experimentors your humble correspondent has been found one of the foremost. I have seen much on the use of willow. I never tried it for that purpose. No doubt the yearly cuttings may be made useful, but from what experience I have had in willow-growing, I certainly should advocate the European hazel, the plant being stiff and its yearly cuttings making the best of hoop poles or bean poles. They split easy, are hard and tough, and the fruit in the nut family is unequalled.

W. M. B.

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MIDGE PROOF WHEAT.—In a letter to the COUNTRY GENTLEMAN, Mr. I. W. PUTNAM of Centre Belpre, O., says—"We have a variety of wheat sown here this fall, that is proof against the midge, known as the "Lambert." It is a smooth head wheat, red short heads, heavy straw, stands up well, and has yielded as high as 30 bushels per acre—tillers well. One bushel per acre better than 1½ bushel of the white wheat—makes good flour, and weighs well, trom 60 to 66 lbs. per bushel. If desired I will send a few heads that are about a fair average; it ripens as early as the May wheat and a larger grain. I think it a better wheat than the Mediterranean, and for thin land far ahead of the May; it has taken the place of all other varieties here or where known, and will so long as we are troubled with the midge. There is something peculiar about it that it is not affected by that little destroyer of our great staple, as none have never been found in it yet when grown in the same field."

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☞ An Iowa subscriber, to illustrate what he is willing to give for THE COUNTRY GENTLEMAN, mentions under date of Dec. 29th, that the $2.25 he thus encloses to pay in advance for that paper and for the ANNUAL REGISTER for 1862, is an equivalent to sending us 112½ pounds of Pork, or over *five and a half bushels* of Wheat, or *fifteen bushels* of Corn! He adds: "I conclude to make the sacrifice, feeling assured that I shall be the gainer by it."

Inquiries and Answers.

Clover.—I have tried for some time to get a kind of clover to sow with timothy that would be ready to cut when the timothy is. Last spring I got a few seed in a package from the Patent Office; it has bore but one head yet; the head was three inches long and ran to a point. Is it the right sort? J. W. C. *Beach Grove, Ind.* [The Patent Office clover, is probably the *Trifolium incarnatum*, a species of no value. The large variety of common red clover, sowed quite thick, so as not to be so coarse in stem, does pretty well to grow with timothy, as the latter needs cutting rather earlier for its period of maturity than most grasses, on account of its coarse texture. Cut as late in its season as some grasses, it is too harsh and rigid]

Ozier Hedges.—I wish to start some Ozier willow. Which is most profitable for selling to basket-makers or for hedging, the purpurea or viminalis? Will they both grow thrifty on upland? Or will either make a hedge strong enough to turn unruly stock, such as slab-sided hogs or burry sheep, or the like? How long will it take to make a fence? J. W. C. [The willow known as the purpurea, is the best for baskets. Both will make a hedge, but the purpurea being toughest, will doubtless be best. They will grow on upland, but it should be good soil, and be well cultivated for several years. Four or five years, with good management, will make a hedge, but not sufficient for furious animals. Interweaving the stems may be necessary, and a very stout growth, for such animals. Slab-sided, land-pike hogs, running in streets, and taught to pilfer their living, will pass almost any common fence, and should not be permitted in civilized neighborhoods.]

Aspect of Orchards.—Shall I plant peach and dwarf pear trees so that they shall have a *southern*, rather than northern exposure? Please tell me which would be the better way for this latitude? J. L. *Ellicott's Mills, Md.* [Where the peach crop is occasionally destroyed by frost or the intense cold of winter, a southern sheltered aspect is not so good as more exposure, especially if the former be a warm valley,—where growth continues later in autumn and the wood does not ripen so perfectly, and become hardy, and where the cold air is likely to settle on severe nights, and prove more destructive. The time of the ripening of peaches and pears, is nearly or quite as soon on a northern as a southern exposure. (Grapes only, form an exception to this rule.) Pears will flourish in either place, and as they are rarely if ever destroyed by frost, the warm aspect is well adapted to them.]

Barberry Hedge.—Can you tell me where to obtain information how to set out and train a hedge of Barberry plant? H. S. *Dayton. O.* [It is easy to make a barberry hedge. Plant the seed, like apple seed, taking care, after washing them from the pulp not to allow them to become dry, and expose them to freezing in winter. When one year old, set them out eight inches apart. Cultivate them well for five years, keeping a strip of land constantly clean and mellow five feet wide on each side of the hedge. As the plants never grow very tall, and are are naturally very thick, they need little cutting back]

Mutton Sheep.—Do sheep usually double their number every year, and what common breed is the best for raising mutton from? J. L. *Md.* [A flock, selected all ewes, with the best management, will usually nearly double their numbers in a year. Of course a common mixed flock of ewes and wethers will not. The common sheep of the country are of all imaginable variations, but in the northern states, they consist largely of Spanish Merino blood. Procure a Leicester or South-Down ram, and the progeny will be excellent for mutton.]

Barometers.—When two barometers standing close together deviate some days 5 to 14, how would you recommend to obtain a correct idea which was most to be depended on? B. [It would be difficult to say, until we know the cause of the inaccuracy. Unlike a thermometer, a mercurial barometer, if the vacuum is perfect, will always show the true height, irrespective of inaccuracies in the tube, the atmosphere having full access below. But there are so many different modes of constructing barometers, that a knowledge of the mode of construction, and of the particular derangement, are necessary, in prescribing a cure.]

Osage Orange.—Does the Osage Orange ever sprout from the roots so as to spread into the field? J. W. C. [We have never seen it throw up suckers, but have heard of its doing so further south, in very fertile soils. When the roots are broken by the plow, it sometimes induces sprouts.]

Trees for Timber.—What kind of trees would you think most profitable to plant, to raise for timber for farm and farm building use—black locust, deodar, spruce, chestnut, fir, pine or what? J. W. C. *Indiana.* [Our correspondent can judge best for his own particular locality, which is best suited to the soil, grows most vigorously, and is most valuable for timber. The locust and chestnut are doubtless the best for raising in most places. The Deodar is not to be recommended at all.]

Disease of Apple Trees.—I have apple trees that are dying around the body, next the ground; they begin to die on the south side, and the bark becomes loose and the leaves turn yellow. E. P. [This is a disease that occasionally occurs—no certain remedy has been found. To prevent it, drain well, and give good cultivation without high manuring.]

Coal Ashes.—Some one inquires about hard coal ashes. I don't think one can afford to buy them, but they will pay for drawing off. There is a little lime in them, and some wood ashes from the charcoal and kindling. I have repeatedly spread them, after thorough screening, on pasture land, making a green spot which could be seen a large way off. J. S. G

Corn-Marker.—Will you please in the next number of The Cultivator, give a plan of a cheap corn-marker. A. B. [Take a piece of tough scantling, set in a couple of smooth round poles for thills, and between these, behind, a couple of old plow-handles, or a bow or frame to answer the same purpose. Then set in below, into large auger holes bored for the purpose, thick stout pins, say three inches wide, six inches long, and inclining backwards. If the scantling is nine feet long, three teeth may be inserted, each four feet apart, or if eight feet long, each may be three and a half feet apart. If the first row is straight, the rest may be kept so, by one tooth passing in the old mark.]

Osage Orange.—Please tell me through The Cultivator, if I can grow the Osage Orange from cuttings, taken from large plants W. A. F. *Shirleysburg, Pa.* [They will not grow with ordinary treatment. Cuttings of the roots will sometimes produce plants, but the easiest and cheapest mode by far, is to plant the seed.]

Corn-Planter.—Will Emery's corn-planter work in a gravelly or other soil, where there are plenty of small stones? R. [Emery's corn-planter will work well where there are a few small stones; the larger and more numerous they become, the greater of course is the difficulty. If three or four inches in diameter, and not very numerous, it will pass round or thrust them aside; if abundant, it will be difficult to use it]

Enlarged Hoofs.—Under the head of Inquiries and Answers, an owner of a cow complains of "enlarged hoofs," and wishes to know if the hoof will bear paring down. I answer yes—Take her to into the blacksmith's ox-frame, and with a fine saw cut off the ends to the proper length; then pare the sole as much as necessary. I had a bull treated in this manner with perfect satisfaction. L. S.

Amherst, Mass.

Strength of Shafts.—In making a wind-mill of rather more than one-horse power, what size ought the main shaft to be; also the driving shaft, if only about eleven feet long? Which is the better way to have the power communicated, by means of cog-wheels, or a crank? If by a crank, what size should the connecting rod be? R. [There are many circumstances that modify rules for this purpose. For example,—materials vary much in strength—the best wrought or cast iron is from three to four times as strong as the poorest—and the strength of different kinds of wood varies nearly as much. Experiments have been performed in twisting iron rods, to ascertain their strength. A cast-iron rod, an inch long and an inch in diameter, with a lever to twist it 30 inches in length, broke with 436 lbs.—which multiplied by the 30 would be about 13,000 lbs. actual strength. If the arms of a wind-mill averaged 60 inches long, such a shaft would only sustain 218 lbs applied at the 60 inches distance. Wrought iron hoisted with 336 lbs. and broke with 615 lbs. An inch and a half will do for one-horse power, moving slowly, with 60 inch levers or arms. When the velocity is increased, the required strength is of course diminished, according to the rule of virtual velocities, hence a shaft in a thrashing machine moving a rapidly revolving cylinder may be many times weaker than one next the horses which work it, or moving slowly. If of wood, it should be nearly twice the diameter of iron. The rule of engineers, to ascertain the strength required to resist torsion (or twisting) is the following:—Multiply the pressure on the crank-pin, or at the pitch line of the pinion, by the length of the crank or radius of the wheel in feet; divide their product by 125, and the cube root of the quotient is the diameter of the journal in inches of wrought iron. Without knowing more of the structure of the machinery to which our correspondent alludes, we cannot answer his other questions satisfactorily.]

Seeding Moist Land.—Is there any better grass for moist land than timothy? I have 15 acres of wet land that I drained this fall with a mole ditch; it has now a heavy growth of wild grass, and I wish to get it into a meadow as soon as I can. Would a mixture of grasses be better than timothy alone? w. m. *Danby, Ill.* [There is no better grass for moist (not wet) land than timothy. An objection to it, when sown alone, is that it produces little after growth, and the stubble is therefore rather bare. When the soil is dry enough, clover therefore forms a good mixture, to be followed by June or Kentucky Blue grass; but if the soil is too moist for these, as is probable in this instance, then a mixture of Timothy and Red Top should be sown, the latter forming a fine turf.]

Warm Stables.—I have recently erected upon my farm, a barn, size 35 by 47, with shed and horse stable attached, 17 by 30. I have done considerable work, and subjected myself to some expense for the purpose of getting a good underground stable. I think I have one as good as can be found in this part of the country. Is there danger of keeping cattle too warm for their good, if the air is kept pure. h. s. *Norfolk, Conn.* [The temperature of a warm underground stable in winter, is of course much lower than that of ordinary summer air; consequently cattle could not possibly be injured by the lesser warmth alone, in winter. Warm stables are often supposed to, and do injure animals, because that warmth is secured by retaining moisture and bad odors. Let them be dry, or made so by free ventilation, and let all the bad odor of the manure be carried off or prevented by keeping the stable perfectly clean, and no evil can result from the moderate warmth derived from the earth through cellar walls and cellar floors.]

Strawberries.—A friend has a piece of land on the north side of a hill, which is a month later than that on the south side, and as he is desirous of planting it to strawberries, he wishes to know if you can tell him the best variety to plant on such a piece of ground. t. r. *Pawtucket, R. I.* [Probably any of your good hardy sorts would succeed on either piece of ground, such as the Scarlet, Wilson, Triomphe de Gand, Jenny Lind, &c. If any distinction of sorts were made, the more northern varieties would perhaps be placed on the north side, and the southern on the south side.]

Cisterns.—I have a cistern, made of brick between the house and barn, which holds about 75 barrels of water, with a pipe to the house, and also to the barn, which will be exposed to some frost in the cellar. How can it be best protected? j. w. y. *Connecticut.* [Keep the water in the cistern as warm as practicable, by a cover of at least one foot of earth, for which purpose the cistern should be arched over the top, like an oven, with a hole large enough to admit a man for cleaning—this arch will support an earth covering of a foot or two, or more, without any danger of falling in, if well built. The pipe to the barn cellar is, of course, under ground, and the trough or tub which it supplies, should be either sunk in the earth to within a few inches of the top, or be packed all around with a foot or two of sawdust or tan. A thick plank lid to cover it in severe weather, and opening by hinges, will protect it from freezing.]

Manuring Fruit Trees.—Which is the best season of the year to dig around and manure our apple, peach and quince trees, early in fall or during the spring months? Please tell about what time would be best. a. s. *Fairfield Co., Conn.* [Late in autumn is the best time to apply the manure, the winter and spring rains carrying the enriching portions into the soil. The remainder of the manure may be spaded in in spring. If the application has not been made in autumn, apply the manure now, and dig in during spring. If "digging around" means also cultivation, or simply mellowing the surface, it should be done repeatedly throughout the growing season, and extend as far on each side of the trunk as the height of the tree, and is cheapest done by horse power. This constant cultivation is most important for peach trees.]

Analysis of Roots.—Will you or some of the numerous readers of your paper. give the analysis of the various kinds of roots for feeding cattle. a. f. s. *Kingston, N. Y.* [The nutritive value of several kinds of roots, as deduced from analysis, is as follows. The first column gives the quantity of nitrogen in 100 parts of the dried substance; the second the number of pounds to be equal to 100 pounds of good hay—according to Boussingault:—

Swedish Turnips,	1.83	676
White Sugar Beet,	1.43	669
Carrots,	2.40	382
Potatoes.	1.50	319

Actual experiment made the real nutritive value of the turnips and beets greater than these figures would indicate, while it more nearly agreed with those as given for carrots and potatoes]

The Mealy Bug.—If through the medium of your paper you can inform me how to exterminate the "mealy bug," which affects some of the plants in my green-house, you will do me a favor. j. s. c. *New-Jersey.* [Different remedies are used. Tobacco water is probably one of the best, applied by means of a syringe, Some plants are more sensitive than others, and may not bear it so strong, in which case the strongest should be diluted. A pound to a pail of water will usually answer. We have been told that a solution of an ounce of camphor in two quarts of alcohol, would effectually destroy these insects. In some instances, where the plant may be encased in muslin or paper, the fumes of burning tobacco may answer. Soap suds will do well for plants not injured by it]

Early Cabbage.—Please to tell the time to plant cabbage so as to have them very early. d. *New-Jersey.* [Sow the seed in a hot-bed in March—the earlier the hot bed, the sooner the crop will be ready for use. Set out in open ground as soon as the soil can be made ready, cultivate well, and such early sorts as Early York and Early Sugarleaf will give good heads by midsummer. It is important to have a deep, very rich soil, and to cultivate it every few days while the crop is growing]

Plan of a Piggery.—Our correspondent, J. W. Yale of Meriden, Ct., who inquires for a plan for a hog pen, is referred to the second volume of *Rural Affairs*, p. 33, for a complete plan and elevation of the building.

Tree Tomato.—*W. S. S.* The person whom you addressed in relation to seeds of this plant, had gone to "the wars." You will see that it is advertised in this paper by L. Norris of Windsor, O.

The Age of Trees.—"St. Lawrence" inquires in the last number of the Country Gentleman if the popular belief that the age of trees can be determined by the concentric rings of the wood, is correct? I can give, as some of the "facts" which he calls for, the following:—I slit the bark of a young tree about half a foot down its stem, so that this slit bark could be lifted or raised off without injury or breaking it. I then slipped in, next to the wood, a piece of sheet-lead, going around it. The bark was then brought back to its former place, and kept there a time by tying. The new wood of course formed outside of the sheet-lead. After a lapse of years, the tree was cut down, and the number of rings outside the lead, corresponded with the number of years since its insertion. I have also cut down trees in repeated instances, several years of age, and always found the rings to correspond with the time since they were set out, added to their age at that time. t.

Beardless Barley.—In the Co. Gent. of Jan. 9th, R. wants to know where he can obtain some beardless barley. I have a few bushels, and should be glad to sell it. After having tried it for two years, (I started with a very small quantity of seed,) I am quite willing to dispose of my "stock in trade," and stick to the old variety. The beardless barley is heavier, but I do not think it yields as well as the other kind. And then, there is no market for it. Those who buy for brewing, malting, or pearling, don't want this kind. I think, however, it would make very good feed. But one great objection I have to raising it is, that it thrashes so hard. A machine might separate it from the straw, but it can't be done by the flail—at least that was the case with mine The heads break very easily from the straw, and the kernel is so completely enveloped in the chaff that it is necessary to literally chop the heads fine to get the grain out. I became exceedingly disgusted with the thing, when I undertook to thrash a small piece I raised last season, and finally gave the straw to my horses, half thrashed. I can see no object in raising this grain, unless one is overrun with rats and mice, in which case—if this is his only crop of grain—he will be likely to starve them out. They would either have to emigrate or die—for they could not shell it fast enough to keep themselves alive. j. l r. *Jefferson Co., N. Y.*

Butter Worker.—A good butter worker ought to be introduced into this section, (Litchfield Co., Ct.,) as at present the hand is mostly used for this purpose. It must be cheap, durable, simple and efficient. Such an one would pay for itself many times over in one season, from the increased value of the butter. Let us hear of the best in use? or will inventors furnish us a perfect implement. t.

Coe's Superphosphate of Lime.

The following letter from Hon. Marshall P. Wilder. one of the most eminent agriculturists in New-England, gives a very gratifying account of some experiments with Coe's Superphosphate of Lime:—

DORCHESTER, Nov. 20, 1861,

DEAR SIR:—I take pleasure in enclosing, for your examination, some facts in regard to the comparative value of the Superphosphate of Lime purchased of you last spring.

Experiments on Old Mowing Land.

This land was divided into three equal lots of one-fourth of an acre each, and dressed as follows:

		Hay Product.
No. 1, with one-half cord manure, valued at,........	$3.00	864 lbs.
No. 2, with 100 pounds Guano, do.	3.00	750 lbs.
No. 3, with 100 lbs. Coe's Superphosphate of Lime, valued at, ...	2.50	948 lbs.

Experiments with Carrots.

This land was old sward land, turned over last Fall, and was divided into three equal lots of one-eighth of an acre each:

		Product.
No. 1, with 1¼ cords manure, valued at,............	$8.00	75 bush.
No. 2, with 50 lbs. Guano, do.	1.50	60 bush.
No. 3, with 50 lbs. Coe's Superphosphate of Lime, valued at,......................................	1.25	90 bush.

Experiments on Two Acres of Old Meadow Land.

This land had probably never been plowed before. In the month of August last the brush, brakes, hedge, &c., were taken off, the sod reversed, and the surface made as level as practicable. It was then seeded down with foul meadow and red top seed, with 400 lbs. of your Superphosphate of Lime to the acre. The seed came up well, and at this time the grass is so luxuriant and thickly set that it attracts attention at the distance of half a mile or more, and should the grass not be winter-killed with ice, there will no doubt be a fine crop next summer. In this instance, as in many others, the economy of the Superphosphate over common barnyard manure, is evident, the cost of the former being not more than the expense of carting would have been of a sufficient quantity of stable manure to produce a like result.

The Superphosphate of Lime is therefore a valuable fertilizer in the reclamation and renovation of old pasture or meadow lands, and especially so where lands like the above are located a mile or more from the homestead.

Superphosphate of Lime is a valuable article in promoting the growth and increasing the fibrous roots of young trees and grapevines, and when applied in liberal quantities to the roots of bearing trees has a beneficial influence on the size and beauty of the fruit. It is equally useful as a fertilizer for cereals, grasses and vegetables, and from experiments made heretofore, I have hopes that it may prove a preventive of the blast upon young seedling pear stocks, and to the mildew on peas and other plants subject to these diseases.

As a quick and also as a durable fertilizer, I have seen many proofs in past years. I have ever considered it as one of the most economical manures in use. Yours respectfully,

MARSHALL P. WILDER.

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[For the Country Gentleman and Cultivator.]

FEEDING AND WEIGHING SHEEP.

LUTHER TUCKER & SON—Enclosed please find $12 more to apply on subscription list of your valuable paper for 1862. You will find no loss of old subscribers—but an increase of new ones. You have a rare faculty of making every subscriber to the Co. GENT., believe that after one years' subscription, he cannot do without it.

I comply with your request to "every one making remittance, to note something, either relating to the crops, the weather, or any thing that may interest." My item for the present time, relates to my manner of weighing sheep—where it is necessary to "sling up" as in weighing with the common "steel-yards" or "balances" of the country. The more general way is to use a strap or rope passing between or back of the fore legs and just before the hind legs, crossing over the back. A heavy hearty sheep in full feed suspended thus, must find it very uncomfortable for the time being, and besides run a great risk of sustaining permanent injury. By my plan a common rope or strap can be used, no matter how narrow—but the wider the better. The "bail straps" of a double harness, with the two ends buckled together, make a good length for a sheep weighing from 125 to 175 lbs.—but not long enough for one weighing 200 lbs. or over. Drop one end over the head, just under the brisket forward of the fore legs, the other back of the hind legs under the hams. Raise the sides together over the back, or cross them over the back when putting under the brisket and hams. A sheep is so formed that the strap will not slip off, no matter how much he may try to struggle. There is also not the least danger of injury. This plan, however, may be nothing new to many of your readers, but I find it very convenient, often buying sheep by weight, when very fleshy. It is my custom to feed more or less sheep every winter. By the way, why will not our farmers who raise sheep, feed more of their coarse grain and roots to them during the winter season. There is no kind of stock that can be fatted so profitably and easily in cold weather. They will "grind" their own food—all "milling" can be dispensed with. The capital articles in your own paper, and one in particular, in an exchange, upon this subject, ought to bring it forcibly to the mind of every farmer. There is an interest in sheep feeding to one who really *takes* an *interest*, that makes it very pleasant. Experiments can be so readily made as to the amount of feed, variety of grain or roots necessary to produce certain results within a given time, the expense, &c., the shape and disposition of the individual sheep best for feeding purposes, the breed, &c.

This winter in beginning to feed my heavy sheep, I have started very light. Still I find by reference to my stock book, that one sheep in 30 days gained 15 lbs.; 1 in 20 days 10 lbs., while others on the same feed gain but 5, 3 or 2 lbs. But enough for the present. J.

BERKSHIRE SWINE AND YOUNG
SHORT-HORN BULLS FOR SALE.

Berkshire Sows to produce litters in April and May next varying in price from $20, $15 and $10 each—and Boars old enough for propagation, at the same prices. Boxed and delivered on rail car or shipboard.

L. G. MORRIS.
Jan. 23—w&mtf. Scarsdale P. O., Westchester Co., N. Y.

NEW AND CHOICEST VEGETABLE
AND
FLOWER SEEDS.
BY MAIL POSTPAID.

The subscriber offers the following selection of RARE SEEDS, on terms to suit the times: The new French Tree Tomato. This has the form of a tree, about two feet high, and is self-supporting. Fruit large, color scarlet, very productive, and of good quality. Also Lester's Perfected. and the Scarlet and Golden Cluster Tomatoes. ——The Pomegranate; fruit about the size and color of the Lemon; extra for sweetness.——Asparagus Bean, a variety—the pods attain the length of two to three feet. When young and tender we cook these pods, and serve as asparagus, which are very delicious.——Strawberry Pea, in height about six inches, very prolific, of good size and quality.——New variety of Spring Wheat from Japan; the most productive grain known to us.——Also an extra variety of Red Sweet Corn, Paris Red Cos, and India Lettuce; German Sweet Turnip, Cabbage, Sea Kale, Mammoth Mustard, Japan Pie Melon, Negley's Improved Cucumber, Madras Radish, very choice, fine solid pods for pickling or salad: Dwarf Broom Corn, Hubbard and Pineapple Squash, &c.

Our FLOWER SEEDS will include many of the new and choice varieties, such as Hunt's Sweet Williams, Double Zinnia Elegans, HEDDEWIGI, (new Japan Pink,) Asters, (new and rare sorts mixed,) Hyacinth Flowered Larkspur, Verbena, Acroclinium Roseum, Gaillardia grandiflora, Chrysanthemum, (new.) Camellia Balsams, Lythum Roseum, Blue Bells of Scotland, Godetia, Bee Larkspur, Prussian and Dwarf Morning Glories, Salpiglossis, Red and Blue Tassal Flower, Green Centered Helianthus, Rose of Heaven, Marvel of Peru, German Stock Gilliflower, Golden Bartomia, Petunia, SOLANUM, (atropurpureum,) a splendid parlor plant; Scarlet Egg Plant, Evening Primrose, Snapdragon, Portulaca, Forget me-not, &c., &c.

Any person may select ONE PAPER of either of the above varieties of Seeds, and remit to us ONE DIME, or 5 papers 25 cents; ten papers 40 cents; twenty papers, 75 cents; or thirty papers for $1. You can select a part from the Vegetable and a part from the Flower Seeds to make out these numbers, if you choose. Send current bills, small silver or gold coin, or United States postage stamps.

Jan. 23—w2tm2t. L. NORRIS, Windsor. Ashtabula Co., Ohio.

COE'S SUPERPHOSPHATE OF LIME.—
Office 19 Broad-Street, Boston.

For Testimonials of the value of this article, address COE & CO as above. April 4—w1y.

ALBANY COUNTY AG. SOC'Y ELECTION.

At a regular meeting of the Albany County Agricultural Society, held at the City Hall on the 8th of January, 1862, the Annual Election for Officers for the ensuing year, was postponed till Wednesday, the 12th day of February, 1862, at 12 M., at the Mayor's Court Room, City Hall, Albany. A full attendance is desired.

By order, R. H. BINGHAM,
Jan. 16—w4tm1t. Secretary pro. tem.

THOROUGH-BRED AYRSHIRES, DEVONS & ALDERNEYS FOR SALE.

"BESSIE," Ayrshire, 3 years old, Heifer Calf by her side—a very fine heifer. Also 1 and 2 year old BULLS. Prices to suit the times.

ALFRED M. TREDWELL,
Jan. 16—w2tm1t. Madison, Morris Co., N. J.

IMPORTANT TO CHEESE MAKERS.

THE ONEIDA CHEESE VAT,

Ralph's Patent, is superior in practical utility, material and workmanship to any in use. Though but recently patented and introduced to the public, the demand for them is unprecedented. Circulars containing a general description, sizes and prices, sent by mail on application to WILLIAM RALPH, Holland Patent, N. Y., of whom State, County and Town rights for this valuable improvement may be obtained on reasonable terms. Jan. 16—w&mtf.

THE NEW-YORK AGRICULTURAL WAREHOUSE AND SEED STORE.

189 & 191 Water-St., New-York.

HORSE POWERS, THRESHERS, and CLEANERS, of our own and other manufacturers.

HAY PRESSES for hand and power.

ICE TOOLS of all kinds.

STUMP PULLERS of several patents.

IRON AND BURR STONE FARM MILLS.

FANNING MILLS of the best patterns.

CORN SHELLERS of new and improved patterns, including ALLEN'S and BURRALL'S Patent.

HAY, STRAW and STALK CUTTERS.

ROOT CUTTERS of various kinds.

PATENT CYLINDER PLOWS of all sizes.

PRINDLE'S PATENT STEAMER for cooking food for stock.

POP CORN of superior quality.

The largest assortment of Agricultural and Horticultural Implements, Fertilizers, Field and Garden Seeds, in this city.

Sole Agents in the United States for THORLEY'S FOOD FOR CATTLE. R. H. ALLEN & CO., Successors to R. L. Allen.
Jan. 9—w&m1t.

BERKSHIRE PIGS FOR SALE—OF PURE BREED.

$5 each when six weeks old. WM. J. PETTEE,
Jan. 9—w&mtf. Lakeville, Conn.

THOS. WOOD continues to ship to any part of the Union, his celebrated PREMIUM CHESTER CO. WHITE HOGS, in pairs not akin, at reasonable terms. Address.
Jan. 10—w&mly. PENNINGTONVILLE, Chester Co., Pa.

CHOICE POULTRY FOR SALE.

WHITE LEGGED DERBY GAME FOWLS, bred from stock obtained a few years since at Knowsby, England.

STREAKED-BREASTED BLACK-RED GAME FOWLS, bred chiefly from stock obtained of the late Lord Berwick in 1859.

TOULOUSE GEESE, bred from stock imported from France by A. W. Austin, Esq. These are considered in Europe the largest of al geese, and are much esteemed by epicures for the excellence of their flesh.

Price of the Game Fowls, $5 per pair; of the Geese, $12 per pair. All the stock is of the best quality. SANFORD HOWARD,
Nov. 14—w3tm2t. Office of the Boston Cultivator, Boston, Mass.

BRIGHT ON GRAPE CULTURE—

SECOND EDITION.

THIRTY PAGES OF NEW MATTER,

with the experience of 1860 and '61, being the most important part of the work. Indispensable to all GRAPE GROWERS. Sent by mail, free of postage, on receipt of the price, 50 cents, in stamps. Address
WILLIAM BRIGHT, Box 138 Philadelphia P. O., Pa.
July 4—w&m3m.

DOWNING'S FRUIT AND FRUIT TREES.

Just Published and for Sale at this Office—sent by mail, postpaid, at $1.75.

100,000 BARRELS OF THE

LODI MANUFACTURING CO.'S POUDRETTE,

FOR SALE BY

JAMES T. FOSTER,

No. 66 Cort'andt-St., New-York.

THE large facilities which they enjoy by exclusive contract for all the night soil of the city of New-York, and the large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking COST and YIELD into consideration. It will be sold at the usual price of $1.50 per barrel for seven barrels or over, delivered free in New-York city.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-Street, to No. 66 CORTLANDT-STREET.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call attention to the following experiences of practical farmers in different sections of the country:

NORTH PEMBROKE, MASS., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., etc., with indifferent success, in the spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last spring I procured from your branch office in Boston about 30 barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I plowed about two acres of light sandy soil, which had laid in grass about six years (the last crop of grass being very light.) This I planted with corn and potatoes, applying about four and a half barrels of Poudrette, with no other manure, except a handful of ashes to each hill at the first hoeing, and from present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

MERRILL, ME., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first I got sick of it, and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor who bought the other barrel says if he had bought five barrels more he would have saved the price of twenty barrels. Yours, &c.,

V. B. PAUL.

WALDO, ME., Oct. 12, 1861.

To to the Lodi Manufacturing Co.:

Gentlemen—Last spring I bought from Cross & Newell one barrel of your Poudrette, as an experiment, with but very little faith in its utility. I put it on 6 rows of corn in different parts of the field, after manuring with barn-yard manure in the usual way—at the second time hoeing, where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year.

Yours, &c., WELLINGTON SHOREY.

SMYRNA, DEL., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it. Yours, respectfully,

JOHN G. BLACK.

CHESTER, PA., Sept. 14. 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette, and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Needle's New Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.

Yours, &c., A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address

"JAMES T. FOSTER,"
Care of Lodi Manufacturing Co.,
Jan. 2—w13tm3t. 66 Cortlandt-St., New-York.

THE ILLUSTRATED
1862. ANNUAL 1862.
REGISTER OF RURAL AFFAIRS.

THE EIGHTH NUMBER, for 1862, of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS has now been issued from the press. In the attractiveness and value of its contents we do not think it has been surpassed by any preceding number. We submit below a partial abstract of its contents, which will show their variety and the extent to which they are illustrated—the present number of the ANNUAL REGISTER containing more than

One Hundred and Sixty Engravings.

TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

PARTIAL ABSTRACT OF CONTENTS.

Among other valuable chapters, the ANNUAL REGISTER for 1862 will contain the following:—

I. FARM BUILDINGS—THIRTY ENGRAVINGS and Four Designs.
  1. General Considerations.
  2. Estimating the Capacity of Barns.
  3. Form of Farm Buildings.
  4. How to Plan a Barn.
  5. Barn Basements.
  6. Cost of Barns.
  7. Design One– Barn for Fifty Acres or Less.
  8. Design Two—Barn for Seventy-Five to a Hundred Acres.
  9. Tool Rooms and Details in Stable Construction.
  10. Design Three—A Large Three Story Barn.
  11. Design Four—A Small Three-Story Barn
  12. Various Details.

II. VEGETABLE PHYSIOLOGY, or How Plants Grow—SIXTY-ONE ENGRAVINGS.
  1. The First Formation of the Embryo.
  2. The Seed and the Requirements for its Germination.
  3. Process of Germinating in Plants having One and Two Seed Leaves.
  4. Mode of Growth and Structure of the Plant or Tree.
  5. The Root—Layering; Cuttings; Transplanting
  6. The Stem and Branches.
  7. The Buds and Leaves.
  8. The Process of Growing.
  9. Principles of Grafting and Budding.
  10. Flowers—their Organs; the Crossing of Different Varieties.
  11. Species and Varieties.

III. THE GRASSES—THIRTEEN ENGRAVINGS.
  1. Importance of the Grass Crop.
  2. Descriptions of the more Common Species.
  3. Nutritive Value of Hay.
  4. Management of Grass Land.
  5. Suggestions in Hay-Making.

⁂ This article includes plain and concise descriptions of no less than TWENTY-TWO of the different grasses, with the peculiarities of which every farmer should be familiar—eleven of them accompanied by carefully drawn illustrations.

IV. LIGHTNING RODS—THIRTEEN ENGRAVINGS.
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  2. Materials and Connections.
  3. Length, Height and Supports—Stiffeners above the Roof.
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The Cultivator & Country Gentleman.

THE WHEAT CROP.

As a specimen of a good and profitable crop, we take at random that raised in 1858 by DE AZRO A. NICHOLS ot Westfield, N. Y., reported in the New-York Agricultural Transactions:—

The land was 4 9-10th acres—it was clover sod, plowed late in summer, and the wheat was sown early in autumn. The cost of plowing, harrowing, drilling, seed, harvesting and thrashing, with interest on land and taxes, was $111. The wheat (155 bushels, 63 pounds per bushel) and straw were worth $252—nett profit, $141, or about $28 per acre. We have known many crops much larger than this.

GEORGE GEDDES, in his Agricultural Survey of Onondaga County, estimates the following as the cost of an average crop on a good farm, or twenty bushels per acre, (although over 40 bushels are sometimes raised,) with the nett profit:—

Plowing once,		$1.50
Harrowing and rolling,		50
Drilling,		31
Seed, 2 bushels,		2.50
Harvesting,		2.00
Threshing,		2.50
		$9.31
20 bushels, at $1.25,	$25.00	
Straw,	2.00	
		27.00
Profit per acre,		$17.69

The wheat crop is more liable to uncertainties than corn and oats when all are accompanied with good management; yet with these uncertainties the best farmers obtain as an average at least twenty dollars nett profit yearly in payment for interest on land, taxes, and for superintendence.

Every farmer naturally asks himself the question: How can I always secure such results? A brief summary of some of the leading requisites may assist young beginners.

1. The first, unquestionably, in most good wheat districts, is regular *underdraining*. There are but few places where a strong soil has any other way to get rid of its surplus water than by its soaking slowly, drop by drop, from one side of the field to the other, through the earth, and by evaporation. The first requires weeks; the second a long time, with a large removal of heat carried off latent in the vapor. The drained soil works more easily, is always mellow, is less liable to cause winter killing; and producing an earlier growth and earlier maturity, enables the crop usually to escape the midge.

2. The second is *proper fertility*. Manure improves the texture of the soil, and also causes the grain to vegetate more evenly, to say nothing of the universally admitted influence on good growth. It is more important after other grain crops, as barley and oats.

3. *Winter Protection.*—This may often be given at the same time that fertility is imparted by top-dressing. Spread manure, left over from spring and composted with straw, turf, or muck, well rotted and broken, on the land after it is plowed, and before harrowing and drilling, and it will protect the surface soil and prevent crusting; protect the young plants from wind and freezing, and cause their early growth. It also induces a more ready and certain vegetation of the grass seed. Even if spread finely and evenly while the ground is frozen early in winter, it has proved valuable, and saved a crop of Mediterranean wheat from winter killing, when the undressed portion of the same field was nearly destroyed. Knolls and the more sterile parts of the field should have the larger portion—or all the manure if there is a limitted supply. On very rich land this top-dressing may be useless, or possibly injurious in rare instances by inducing a growth of too much straw.

4. *Good Tillage.*—The soil must be free from weeds, and be well pulverized. Summer fallows are more useful in effecting the first of these two results on light than on heavy lands, generally, and more important for pulverization on the latter. On well managed land, that has a good clean soil, it is not necessary. A clover sod, handsomely inverted late in summer, and then rolled and harrowed, or what is decidedly better, worked with Shares' coulter harrow, forms a fine preparation for wheat. If wheat is sown after oats or barley, an effort should be made to have the stubble as clean as possible. Pigs, geese, and other small animals, should be turned in as soon as the grain is removed. If the weather is wet, the surface should be harrowed to cause the seattered seeds to grow. The growth of green herbage thus produced must afterwards be thoroughly and completely turned under with the plow, and the grain sown on the inverted earth after harrowing. The best way, perhaps, whether the surface be wet or dry, is to plow as shallow as practicable as soon as the crop is removed, to be followed by a second and much deeper plowing before sowing the seed. This will start many of the seeds of weeds, and allow the stubble to decay.

Heavy clay lands, that have not been well underdrained, will usually become cloddy; and they often will, in wet seasons, even with draining. The roller and the harrow reduce these clods very imperfectly; the cast iron clod crusher is far more efficient; and a broad stone boat, properly loaded behind, will often be as much and sometimes more efficient, in grinding down the clods. After using the clod crusher, the soil should be loosened up again by means of a long-toothed harrow, a two horse cultivator, or still better by a scarifier. This loosening is important.

When manure is applied, in whatever way, it should be very thoroughly mixed by repeated harrowings. It thus possesses twice the efficiency over scattered, half broken lumps. If applied only as a top dressing in winter, for protecting the surface, it should be first broken very fine, in order that it may be evenly spread.

5. *Drilling* in the seed, instead of sowing and harrowing in, is a decided advantage. The depth may be better controlled, and a more uniform depth secured. It may indeed in some cases be drilled injuriously deep, but this is only an abuse of the operation. Drilled wheat is less liable to heaving by frost, and if the drills run across instead of with the direction of prevailing winds, the slight furrows formed by the drill serve to protect the young plants when the ground is bare. Numerous experiments show that the advantages of drilling are generally equal to about five bushels per acre, on good wheat land.

6. *Trench Plowing.*—In some instances, the crop may be much increased by mixing the top soil and a small portion of the subsoil together. We have known instances where running the plow two inches deeper than usual, has resulted in a large increase of the product the first year. In another case, an open ditch was cut, and the excavated earth scattered a rod each way. The estimated product on these two strips of land was 20 bushels per acre; on the rest of the field it did not exceed 5 bushels. The draining may have had some influence, but obviously this was quite subordinate. So valuable is a portion of the subsoil in certain localities, that an extensive and successful farmer in a fine wheat district in western New-York, said he would gladly get rid of a few inches of the upper soil, over his whole farm, in order to come nearer the next stratum below. In these instances, although all in what is termed limestone regions, the upper or common soil never effervesced with acids, showing the absence of carbonate of lime, while the subsoil always effervesced considerably. The use of lime has always proved beneficial wherever tried, in these regions; and doubtless the same result as by liming, is attained by bringing up the soil from below. In many other places, the subsoil may be useless or positively injurious. The experiment is easily tried on a small scale, either by deep plowing, or by throwing up from deep holes or trenches.

By a proper attention to these points, as may be required, namely, underdraining, proper fertility, winter protection of the surface, fine tillage, and drilling in the seed, and also in some cases trench plowing, the common uncertainties attending the wheat crop, may be either entirely prevented, or their evil effects greatly diminished. The removal of water by underdraining tends greatly to lessen the danger of heaving and winter killing; destruction in consequence of a bare winter and cold winds, to which the Mediterranean wheat is more especially exposed, is prevented by top dressing. Early maturity, caused by several of these points of good management combined, tends to enable the crop to escape the midge and rust.

It is said that formerly, the prevalence of the Hessian fly, by compelling farmers to improve their management, in order to escape total destruction of their crops, proved a positive benefit, by raising the standard of agriculture. Possibly the wheat midge, by driving farmers from the old skinning system (for it seemed truly a systematic ruin of their land,) and compelling them to adopt the mixed husbandry which is absolutely essential to the highest profit in grain growing regions, although this insect has been an object of such wide extended and lasting dread to many, may in a similar manner ultimately prove a substantial blessing, at least to all those who may have profited by its unwelcome teachings.

◆

Good Pigs.—We often see accounts published of large crops, the great weight of various domestic animals, &c. I would state that Mr. Seth Brockway, one of my neighbors, killed a few days since two pigs, nine months and twelve days old, weighing as follows—350 and 415 lbs.—765. They were fed in all 50 bushels of shelled corn—the corn was boiled or ground into meal, besides the slops from the house. They were a cross, Suffolk and Chester White. N. E. A.

Manuring Wheat on the Surface.

I should be glad of your advice through THE CULTIVATOR, on the following: I must premise that my farm (75 acres,) is most of it hilly, and perfectly dry. My two great objects of attention are wheat, and clover for sheep. Now you recommend to put a top-dressing of short manure and harrow it in, for the wheat crop. I should like to do it on all my wheat land, but I find it takes almost, and sometimes quite, all the manure I can make, for my corn, potatoes and turnips. How would turf and earth from the sides of the brook, and from hollows between the hills, answer for this purpose, if dug in the spring and mixed with lime, which costs about 20 cents a bushel within a short distance? Do you think it would pay for the labor? How much do you think it would add to the wheat crop, and how many bushels of lime per acre would you recommend? JOHN ATKINS. *Fonthill, C. W.*

The object of manuring the surface is two-fold. First, to enrich the land by presenting the elements of fertility near the surface, where most of the roots of the young wheat plants are found. Secondly, to protect the surface from the effects of hard freezing. The latter is most important on heavy soils. There is another advantage where clover seed is sown, in the greater vigor imparted to the young plants, and the seed "catches" better. The lime compost would give these results but very imperfectly at best. In some localities, lime is very beneficial to wheat, but the degree of benefit can be determined only by experiment; for in some regions where lime occurs in abundance, as for example in parts of Western New-York, its application has produced decidedly beneficial results; while in others, where it does not appear among the rocks, as in some parts of New-England, its effects have been imperceptible. We would recommend our correspondent to try the experiment he proposes, as the only way to determine its utility. The quantity of lime per acre is not agreed on by different agriculturists, and varies from 25 to 200 bushels or more. Fifty would perhaps do well for a trial.

Would not the earth from the brooks and low places used in the manufacture of compost, so increase the amount of manure as to admit of manuring both corn and wheat? A free use of litter, forest leaves, dry turf, &c., by absorbing all the parts that are more or less wasted, will sometimes double the ordinary amount of manure.

THE BAROMETER---AN INQUIRY.

Within the last ten years science and the arts have done much to lessen the labors of the husbandman, and to render him better acquainted with the laws of nature; and thus he is enabled to protect himself, to a certain extent, from her changes and vicissitudes. As evidence of the increasing attention which is given to the science of meteorology, which is most vitally connected with the interests and occupation of the farmer, we now find the thermometer in almost every house, and have reason to believe that its changes are for the most part carefully observed, and in all cases a love for scientific observation and investigation is created, which cannot but prove highly beneficial. The barometer is another instrument not as generally known as the thermometer, and which (if half of what its venders and manufacturers say of it is true) is capable of rendering almost incalculable benefits to the farmer by forewarning him of the coming storm, or other changes of the weather.

Doubtless most of your readers have read of its great value on board of ships by warning the mariner of approaching storms and tempests long before his experienced senses can detect the least sign of their approach. To the farmer, "with scarcely an exception, the barometer gives a decided notice of all changes of the weather, as wind, rain, clear, &c., from twelve to forty-eight hours in advance, and by the manner of its movements indicates the *duration* of the change."

The value of such a guide is evident to every one. Whether the above description is truthful and to be depended upon is the object of this article. Any of your readers that have given the barometer a fair trial, and are not interested in their manufacture or sale, who will give us a statement of its *value* to the *practical farmer*, and any other facts connected with the subject, will confer a favor on many of your readers, as well as

St. Lawrence Co., N. Y. ST. LAWRENCE.

We have used a barometer in connection with farming for about twenty years, and in different localities. In some places, where the changes of the weather are more frequent and sudden, the barometer is more uncertain in its indications. It is not so reliable as at sea. The common marks on the scale, of "fair," "changeable," "rainy" and "stormy," are of no use, and serve to mislead; the only rule to be observed is this:—When the mercury falls, rain or wind may be expected—usually rain in summer, and wind in autumn and winter. When the column rises, fair weather may be relied on. In winter it stand highest in sharp, clear weather. On the whole, a barometer is a great help on the farm. Never buy one with an index and dial, but one that shows the mercurial column, which is the most reliable and satisfactory.

SOILING AND MANURE.

I see it repeatedly stated that, by soiling in place of pasturing—1st. That one half more manure will be made from the same amount of stock and feed supplied.—2d. That about the most economimal system of applying manure is to haul and spread it upon the land in its green state—3d. That by using litter, such as straw, leaves, weeds, turf, muck, or soil dried, the liquid portion is made equal in value to the solid. Some addition may be caused by less exercise of animals, causing lesser portions to be carried off by respiration and perspiration—2d. The solid portion, by care, might suffer less by exposure to the sun, rain, &c., and in this case what becomes of the economical method urged by many, of hauling and spreading in its raw state, to be exposed to the storms of fall and winter?—3d. As to the liquid portion, it looks to me very difficult to make a better disposition of it than that the general turf and soil should drink it, to nourish vegetation. We have enough of problems. What we want is solutions. W. E. P. *Eden, Erie Co., N. Y.*

Our correspondent having furnished these problems, we shall endeavor to give him the solutions. Manure drawn out and finely and evenly spread on land late in autumn, is washed into the soil, or if not washed in, then absorbed by it as slowly dissolved by rains. But if scattered in lumps, as by cattle running over the pastures, the same good result cannot be obtained. And if finely spread in summer, without even a shallow covering, its effects may be quite different—at least so experiment indicates. The usual waste by the escape of the liquid manure from barn yards, is by streams and channels that never pass over lands desired to be enriched; or if such streams do pass over the land, it is so uneven that most places get none, and a large surplus escapes.

An important advantage in spreading manure over fields, instead of leaving it in large heaps, is that the latter will ferment, and unless properly supplied with absorbents, much volatile fertilizing portions will be lost.

Manure finely spread, and finely diffused through the soil by repeated harrowings and by plowing, or by being washed into the earth and thus more finely diffused than could be effected by the finest teeth of the harrow, is far more efficient than if thrown in lumps over the surface, or imperfectly plowed under in lumps. One great advantage in forming composts, is the fine pulverization that may be given to the coarse fiber of the litter by decay; and the advantages of this fine pulverization are often so great as to induce some to believe that rotted manure is really more efficient, essentially, than the fresh manure from which it was made, although much of it has already gone to the winds.

CULTURE OF THE WHITE BEAN.

EDITORS COUNTRY GENTLEMAN—A short article on the soil best adapted to, and the proper cultivation of, the the white bean, would be acceptable to some of your readers. BAY STATE.

The cultivation of the bean should be extended. The crop has this great advantage—if the price is low, the beans may be mixed with corn and other grain, ground, and fed to cows and sheep. They are one of the very best kinds of food for milch cows. The crop does not impoverish the land, and when fed to domestic animals, the manure is rich and valuable.

Many suppose that poor land is necessary to raise white beans—only because they will grow better on poor land than other crops. Manuring the land for them has doubled the crop. Nothing is better for them than good rich corn land. If the soil is rather heavy, an excellent way is to turn over clover sod late in spring, roll and harrow it, and plant the beans. There will be less hoeing needed, as fresh inverted sod is usually clean soil. When the soil is free from weeds, the best way is to drill in the beans, so that the drills may be about 2½ or 3 feet apart, and the seed about 2 inches apart in the drills. If a drill cannot be had, furrow out the land, and drop the beans by nailing or tying a small tin pail to the lower end of a rod about the size of a walking stick, make a hole in the bottom large enough for the beans to pass out, and walk along shaking it over the furrow. The quantity or distance may be perfectly regulated by making the hole the right size from trial, by shaking more or less rapidly, and walking slow or fast. If the soil is weedy, plant in hills a foot and a half apart in the row, and seven to a hill. The beans will be yellow in three months and ready for harvesting, which is done by pulling them. If the weather continues dry a few days, they will soon be dry enough, if placed in small heaps. If wet weather is feared, take the bunches and place them in small stacks made around a pole driven into the ground, radiating from the centre or pole, and with either roots or tops out—these stacks may be as high as a man can easily reach, and should be built on four small sticks at the bottom, the size of stove wood, laid across, to keep the beans off the wet ground, and to allow the drying wind to blow under. When quite dry, draw out the pole and draw them to the barn, and thrash in winter. As a single proof of the profits of bean raising, T. C. MAXWELL & Co., of Geneva, N. Y., recently informed us that they had planted small white beans in the vacancies of their extensive nursery, where trees had been dug last spring,—amounting altogether to about 40 acres. The cultivation cost almost nothing, as they stood in rows of scattered trees; but they think if the beans stood alone, the whole cost of cultivation would not have been eight dollars an acre. They had 800 bushels of beans, which sold, at $1.50 per bushel, for $1,200. The cost of cultivation, estimated at the very highest at $320, deducted from this sum, leaves a clear profit of $880 for the use of the 40 acres of land. They have fine, rich, tile-drained land, but it had evidently been considerably exhausted by the previous growth of the trees.

COAL ASHES.

I make from four to six loads of these every winter, which in spring I pay to have carted away as of no use. Our coal differs from your hard anthracite coal. It is bituminous and soft, and burns with a blaze; consequently is reduced to a powder when done with. Would it do to mix the ashes with horse and cow manure, by throwing ashes and all into one heap? Have the coal ashes any specific agricultural properties, and would the mixture of such ashes and manure harmonize, or would one destroy the good effect of the other? The cost of transporting these ashes is another consideration. My summer house and winter house are 20 miles apart, and it costs me 60 cents a load to haul manure in the spring. Would coal ashes be worth 60 cents a load to me? Again, in the summer I haul considerable swamp muck to my place. I suppose the ashes would do very well to mix with the muck; but then would it not be cheaper to use lime than coal ashes at 60 cents a load? An answer would greatly oblige A SUBSCRIBER. *St. John, N. B., Jan.* 11, 1862.

Coal ashes are nearly all earthy, and contain a very little lime and alcali, say about one twenty-fifth to a fiftieth part of common wood ashes. Both vary considerably in their composition, and the wood ashes may sometimes have more than a hundred times as much alcali as coal ashes. The amount in the latter is however often somewhat increased by the wood used in kindling the fires. While therefore it possesses some value for its potash, soda, and lime, it is chiefly useful as an absorbent, being very dry, and in powder. Placed in stables (in the liquid manure gutters, for instance) where it may become saturated with the urine, it becomes very valuable—the more so because such manure is not fibrous from litter, but may be spread finely and intimately mixed with the earth to which it is applied. Used in this way, it would probably be worth over 60 cents per load. Peat or muck, if it could be as thoroughly dried, which is nearly impossible, would doubtless be still more valuable. Coal ashes would be good to mix with manure compost, and would do no harm, and be a good absorbent. On account of its extreme dryness, it is excellent for sprinkling daily into the vaults of privies, destroying the odor, and if used in sufficiently large quantities, allowing the contents to be shovelled out with as little difficulty as sand or earth.

[For the Country Gentleman and Cultivator.]

HOME CULTURE OF TOBACCO.

I always have grown my own tobacco, and manufacture it to suit myself, and prefer it to the "boughten." For our own use, it is not requisite to grow it every year. I generally grow enough on a small patch in one year to last me and my wife, (who uses the pipe also,) four or five years; therefore we always have the article at hand, and are not under the necessity of sending "John" to the "store," every week for a little tobacco.

I have tried several varieties of Tobacco—the "Connecticut Seed leaf," "Cuba," &c., but I find what we call the "Ohio Improved" the best variety. It has a long, wide, thick heavy leaf; and when rightly "cured," it is a superior article. I have saved a quantity of the seed, and any friend who may desire it, by enclosing to me an envelope, already directed, and four or five *penny stamps* to pay the postage, and trouble of putting up the seed, I will enclose and send by mail, a paper of the seed.

Windsor, Ohio. L. NORRIS.

EDITORIAL CORRESPONDENCE.

Trip to Holmdel, N. J.—Monmouth County Farming—A South-Down Cross to Produce "Butcher's Lambs"—Four and Five Course Systems of Rotation—The Application of Marl—Mr. Taylor's Flock of South-Downs—This Breed Requires no Higher Feeding than Ordinary Sheep—System of Feeding here Adopted for Ewes, Lambs and Full Grown Bucks—Importance of Growing Roots, and Experiments as to their Value.

An excursion easily made, and really worth the making to any one interested in South Down Sheep, is a visit at the farm of Mr. J. C. Taylor, Holmdel, N. J. Leaving New-York from the foot of Robinson street, in the steamboat for Keyport, it is only a stage ride of nine or ten miles farther—the whole distance being accomplished in less than four hours. The part of Monmouth county through which the traveller is carried, has made great progress in agricultural productiveness during the past twenty or thirty years. Much of its land is underlain with marl, the liberal use of which as a fertilizer has been the chief source of this improvement. With soils of a somewhat varied character, and a surface generally level, it produces good grain, grass and roots, and is well adapted for such live stock as will command the readiest sale in the great neighboring market of New-York. The farms vary in size very much, as in other parts of the country, running from sixty or eighty up to two or three hundred acres. Hay is baled and shipped to the city in very large quantities, and considerable Indian corn and wheat are also grown. But the potato is, proportionately, the specialty of this region among the crops of the farm; and the county of Monmouth produced nearly 800,000 bushels, according to the census of 1850,—a larger quantity, with but one exception, than any other single county in the United States.

Taking 150 acres as perhaps about the average size of the farms, we should probably find the system of management adopted pretty well represented in the following outline: Say a dozen steers will be purchased in autumn, and carried through the winter mostly upon coarse feed, such as corn-stalks, etc., grazed and fattened through the summer, and then disposed of to make way for a new supply. From thirty to fifty sheep, more or less, according to the supply of feed and other considerations, will be purchased in early autumn from the droves that come along—many of them bred in New-York or Ohio—of the character of the ordinary sheep of these States, in which fine wool and a light carcass form the predominating element. Ewes are selected, and have been bought at about $3 per head for several seasons past; lambs are bred from them, and the whole are fattened and got ready for the butcher during the succeeding summer.

In farming upon this general system, Mr. Taylor about fifteen years ago came to the conclusion that "butcher's lambs" could be bred more profitably by the introduction of better blood on the part of the sire, to secure greater size and earlier maturity in the offspring. Obtaining some South-Downs in 1848, that had been prize takers at an American Institute show, he found this cross upon the common ewes fully as advantageous in both respects as had been anticipated; and similar requirements on the part of his neighbors gave him at once a ready local demand for all the pure South-Down lambs he could spare. Ram lambs, purchased by them at $15 each, were found more than to repay their cost in the increased value of these "butcher's lambs;" and a butcher in the vicinity has remarked that he had himself half-a-dollar's better profit upon dressing a South-Down lamb, from the greater proportion of meat, and the smaller proportion of offal, upon a given live weight, in comparison with other breeds of an equal or greater size.

To complete our brief glance at the Farming of this part of New-Jersey, before referring more particularly to Mr. Taylor's present flock, it may be added that from six to seven dollars advance upon each ewe purchased in accordance with the above system, may be expected by the best farmers—say perhaps $4.50 for the lamb, $1 for advance on the ewe, and $1 for its wool. The best farmers feed the ewes for about three months, say with a half-pint daily of corn meal, together with their hay or corn-stalks, but there are many who think good clover hay is quite sufficient without the meal. Some allow the lambs also to get at the meal, but the quantity they take when so young is not very great. They go out to grass, as soon as it furnishes a good bite, and are sold when the lambs are from 10 to 15 weeks old. The earliest lambs from a South-Down cross will dress perhaps 50 to 55 lbs., but those sold at full three months old or over, ought to reach about 70 lbs.

The rotation employed is Indian corn upon sod land, followed by potatoes, then by wheat, and then by grass. This covers four years, and is the nearest approach to the English four-course system with which I ever happen to have come in contact on this side the water. It has one objection, however: as most of the corn *is sold*, and most of the potatoes, and most of the wheat, and most of the hay—no land that did not lie on a marl-bed could well sustain so severe and constant drafts; there is little or no land in permanent pastures, and the quantity of stock kept is not such as to secure the manufacture of very large quantities of manure. It is therefore thought a *better way*, to let the land lie in grass *two years* instead of one—thus making a five course, instead of a four course system, certainly to the advantage of the land, and possibly not involving any present loss to the farmer. This change, suggested by Mr. Taylor, has a prototype, I may add, in the increasing favor with which the same course has apparently been regarded of late in England, it having been in many instances there adopted as a substitute for the old Norfolk system.

The marl obtained upon Mr. Taylor's farm, and through that region, is got out in winter, exposed to the frost to secure its more ready pulverization, and spread on the land at the rate of a thousand or twelve hundred bushels per acre. This heavy dressing is with the view of adding to the permanent resources of the land; for a smaller one might produce an equal effect upon the crops immediately succeeding. It may be renewed in eight or ten years. The common system is to haul it on to the grass land in winter, preparatory to breaking up the sod for corn in spring; but Mr. Taylor is in favor of allowing the field to remain in grass during the year after the dressing is applied. The different qualities of marl found in different localities in New-Jersey, it may be remarked, are applied in quite different ways; it was mentioned for instance that only a hundred to a hundred and fifty bushels per acre is the ordinary application of the Squankum marl, which is more concentrated in character, and therefore pays for transportation to considerable distances along the canals, which could not be done at a profit with the marl dug about Holmdel.

Our space must limit these remarks upon Monmouth County Farming to a bare sketch, omitting much that would be of interest, and which could be more easily gathered during a summer journey, than at the present season of the year. The chief object of the trip, as already intimated, was to see Mr. Taylor's South-Downs; and, having given above the key to his first selection of this breed, together with facts which serve to illustrate very forcibly its practical value to the farmer, we may now go about among his yards and buildings to admire if we may, and criticize if we can, the animals they contain. There are few, however, who would care to enter into that minute comparison of one with another, and of the whole with other similar flocks here and abroad, which busied us so closely one day last week, and the general result of which is all that most readers will desire to obtain. We came from it, strengthened in the faith before entertained, and more than once expressed in the Country Gentleman, that what is true of our best herds of Short-Horns, is equally true of our best South-Down flocks, namely, that *no farther importations from abroad* will be needed, if we rightly employ the means now within our power of maintaining and improving the stock we have heretofore purchased.

Mr. Taylor's South-Down flock now includes about 75 breeding ewes, of which say 25, are imported; 16 ewe lambs, and 17 ram lambs. He has also six stock rams: four imported—"No. 89," which was purchased for Mr. T., as our readers remember, at Jonas Webb's great sale in 1861, for about $1,300; "Reserve," purchased from Mr. Webb in 1860, and two yearling rams, purchased at the same time as "No. 89." The other two rams are called "Young Prize" and "Vigor," and are sons of the ram imported by Mr. T. in 1858, and called "World's Prize," from his having won the prize at the great international exhibition at Paris. "World's Prize," it may be added, was sold for $1,000 in 1859, to go to California; that year was a remarkably successful one for Mr. T., and among other shipments then made to the Pacific coast, he mentioned one lot of 14 head for which the round sum of $1,400 was paid him.

From the liberal outlay made by Mr. T., during the past seven or eight years, and especially in the determination shown by him for three years past, to secure the best he could obtain in England at whatever cost, I expected much, and yet was scarcely prepared to find so many evidences of a straight-forward, practical common sense manifested in his views and transactions, rather than of any wild enthusiasm on the one hand, or of mere "Yankee 'cuteness" on the other. Believing that he can breed more healthy and hardy lambs by an avoidance of higher feeding or warmer shelter than any humane man ought to provide for his animals, he keeps the flock in open yards with shedding attached, and states, I doubt not with the most entire truth, that South-Downs will keep in better order and even grow fat* upon *no greater allowance of food* than would be required to maintain an equal number of ordinary "natives." Believing that this improvement in mutton sheep is a matter to which far more general attention must be given in coming years, and that the South-Down supplies the best means of reaching that end, it is his design and desire to limit his sales so far as possible to males, or to let their services by the season, where this is preferred to a purchase—"Young Prize," as one instance among others, having been let for the season of 1861 for $80 to Mr. John Worth of Chester County, Pa., a well-known and careful breeder—since it is in this way that the flock can be made to produce the most general and lasting effect. Believing that, starting where British breeders at present stand, and where Mr. Webb is leaving off, he can fully "hold his own" as regards the points of excellence peculiar to the South-Downs, his importations include representatives of different families, so that there need be no in-and-in breeding of near relatives, and he is watching with great care the results of combinations between the individuals of the flock, and the qualities developed by his young stock as they advance. Of the merits of "No. 89" and "Reserve," or of the other imported animals, I need not speak, but it would be wrong to pass by those bred upon the place without a single remark as to the evidence they afford of the success of Mr. Taylor's efforts. We examined a pen of ten yearling ewes, all but one of them sired by "World's Prize," who proved himself very clever as a stock getter, imparting his close fleece, full chest, width of shoulders, spring of rib, and excellence behind, in a marked degree. The lambs by "Reserve" are promising well; there are 14 of them rams and 12 females, some of them reproducing admirably the deep chest, straightness of back and belly, and good hind quarters of the sire, and all of them very full and strong behind the shoulder, where he particularly excels.

In conclusion, Mr. Taylor does not believe, as a practical man, in *sheep-keeping without roots*, fully agreeing with our other leading breeders in the estimate he places upon their value. It is constantly a source of surprise to see that so little attention is paid to this subject by American farmers; and I think I have before published the response once made to me after a lecture in which I had referred to this subject, that "turnips contain ninety per cent. of water, which can be had cheaper out-doors, than to build a barn cellar to house it in." This was intended as a "knock-down argument," and presents an objection to root growing as compared with raising a crop of corn, perhaps as current as any other. Mr. Taylor once put three South-Down lambs, averaging a weight of nearly 90 pounds each, in a yard by themselves, and gave them for six weeks one pound clover hay and about 10 pounds white turnips, each, per day. They kept up their weight, neither gaining nor losing during that period; and as the common rule is about 2½ pounds good clover hay per day to a sheep weighing about 100 lbs., he considered the 10 lbs of turnips equal to about 1½ of hay. Rutabagas were then given to the lambs, in the same quantity as the turnips had been, and with an equal weight of hay, for a fortnight, and they gained each two pounds a week. Farther experiments with sugar-beets and carrots agreed in result very nearly with the last, although of the three, the sugar-beet apparently laid on a little the most flesh. The details of these and other trials, had led Mr. Taylor to estimate five bushels of rutabagas as affording a nutritive equivalent about equal to one of Indian corn; and, as he can raise 600 bushels of the former upon an acre of land as easily as he can 50 bushels of the latter, he does not think it *pays* to neglect them. It should be added, however, that he objects to roots as feed for lambing ewes, until the lambs are say a fortnight old; but he "would not undertake to keep a flock of young and growing lambs without them."

Mr. Taylor's usual system of feeding ewes has been about a bushel of roots to ten head, begun two weeks after lambing, with half a pint either of unground oats, or of corn meal to each—preferring the oats unless corn meal is relatively considerably cheaper. Previously to this time they receive no feed whatever but hay and cornstalks. With the buck lambs he begins in Nov., giving them at first only a very small quantity of oats, and increasing the quantity by degrees, until in February they may get a pound of oats each, and a pint of wheat bran, which is his highest feed at any time. The ewes are not fed at all during winter, because unless kept back then as much as possible, they may get too fat during the coming summer to breed successfully. As to the fecundity of South Downs, I learned on inquiry that from one-third to one-half the ewes in Mr. Taylor's flock bring twins—on one occasion I believe more than half of them having done so.

If my allotted space had not already been far exceeded, there are several other points upon which I should like to have briefly touched; and if my letter is anywhere less full and clear than might be desirable, I presume Mr. Taylor will kindly supply such additional information as may be requested. L. H. T.

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* Mr. Taylor states from careful observation, that his South-Down ram lambs will gain 3 pounds per week, where common ones, either rams or wethers, kept upon precisely the same allowance, would only gain a pound and a half.

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co. N. Y.---VI.

Gang Plows and Wheel Cultivators.

I have alluded, in a previous communication, to the use of gang plows in preparing the soil for wheat in this county, where most farmers prize it highly as an implement of great efficiency and utility. The best gang plows have steel mold-boards, which is a very important feature, as they not only draw easier for the team, but by presenting a smoother surface than cast iron, they will work in light soils without clogging, where the earth would not slip well on mold-boards of cast iron. They possess the same advantage that the steel plows *proper* do, over the ordinary cast iron plow.

In many localities, even in our own State, gang plows have been introduced for cross-plowing the soil, and have been rejected almost entirely, for the reason that the soil was so compact as to require deeper tillage than could be effected with the gang plows.

This is also true of the wheel cultivators, which were introduced very extensively in most of our wheat growing counties, and which were, in most instances, where the soil is of a clayey and stubborn character, thrown aside, and the common plow used in their stead.

But in Monroe county farmers rely upon gang plows and wheel cultivators, where the soil is light, friable and porous, almost as much as they do upon the common plow. But when we come to a clayey farm which has not been underdrained, and where agriculture is *retrogressive* instead of *pro*gressive, we find that wheel cultivators and gang plows have usually been rejected, on account of their inefficiency in cultivating such soils.

The wheel cultivators are so arranged, that they can be adjusted in a few seconds to run at any desired depth from one to six inches; and the gang plows are also adjustible, so as to run deep or shallow; but when the merits of the two implements are compared fairly, I think that good steel gang plows are much superior to a wheel cultivator, for the following reasons:

Fisrt, when both implements are drawn at the same depth, the gang plows, if they cut the same width of a cultivator, will require less force to draw them; and, secondly, they perform the work in a more thorough and efficient manner than the cultivators do; and, thirdly, new points can be attached to the plows at trifling expense, whereas the expense of keeping steel teeth of such cultivators in as good order as they should be, is far more expensive.

After an inch of the edge of steel teeth has been worn off, they will be very inefficient, and will require much more power to draw the implement, although most farmers will continue to use their steel teeth until they have been worn up to a complete stub; and, to appearance, they perceive no difference between the effectiveness of the two—the sharp and well formed teeth and those worn out.

Gang plows will cut every thing up in the form of roots of noxious weeds, and turn them neatly under; while cultivator teeth, unless they are in very good order, will allow most of such things to slide around their edges without cutting them off. Gang plows in that section of country are usually drawn by three horses abreast, or with a yoke of oxen and a horse forward of them.

Farm of R. P. Hubbard.

Having seen several very fine specimens of young horses of the Black Hawk Morgan breed, Mr. Isaac Bower proposed to accompany me to R. P. Hubbard's residence, who was the proprietor of the most beautiful black stallion, of the genuine Black Hawk Morgan breed, that I have ever met with. For beauty of form and symmetry, I have never seen his equal; and it would be exceedingly difficult for any person to point out the spot in him, that could, or ought to be improved, in order to render him a more beautiful animal than he now is. And in addition to his physical beauty, his perfect tractability and docility were most superior and admirable.

He was kept loose in a large box-stall; and when Mr. H. opened the door, he would, at the word, stand on his hind feet, or place his feet on the door-sill, or perform any other feats that he was bid, without a bridle on, which is a very uncommon occurrence, to manage a stallion with nothing but a small whip.

Mr. H. was unusually busy, as most working farmers are at particular times, for which reason our call was quite short.

His fields showed that they were pretty well cultivated; and judging from the abundance of good manure in his barn-yard, which was then being hauled out on oat-stubble, preparatory for a crop of wheat, and judging also from the heavy crop of peas which he was then raking, his system of farm management is by no means retrogressive, which cannot be affirmed of every farmer in that vicinity. I stretched up some of his pea vines, which were well filled with pods, which were as high as my head —5 feet and 10 inches.

His buildings were all in a good condition; and his neat and commodious corn-house and piggery deserves more than a passing notice. The piggery is in the basement of the building, and in one corner is a large cauldron set in brick-work, and a few feet from it is a large box, with sheet-iron nailed on its bottom, which is supported by two walls of brick, with a fire-place between them, for *steaming* potatoes, pumpkins, &c., for his swine, of which he had a lot of very fine ones.

The partition between the feed-room and the apartment where the swine are kept, consists of a large flap, or kind of door, suspended by hinges to a beam directly over the feeding trough. When they are to be fed, the flap is thrust *towards* the swine, and fastened to that side of the trough until the food has been put in it, when the flap is brought to the other side of the trough, and fastened, when the animals can come to their food.

This is, I think, the most convenient mode of erecting a trough for swine, because it not only is so very convenient when distributing their feed, but also when cleaning the trough, which can be done without entering the apartment of the swine.

Wind-Mills.

At a short distance from Mr. Hubbard's residence, we discovered frame work, doors and ceiling, on the top of a barn, which we found to be a wind-mill for pumping water in the barn-yard for stock, which is received in a large water trough until it is full, when the water returns into the well as fast as it was pumped up.

As its arrangement disclosed some novel features, I will attempt to convey an imperfect idea of it.

The wheel was made in an upright position, very much like the fans or blowers of a fanning mill, if they were placed erect, instead of horizontally as they work in a fanning mill. The circle described by the wheel, was about six feet in diameter; and the wings were six feet long—vertically—and about eighteen inches wide, and instead of being straight from side to side, they had been warped, and the wind was allowed to strike the concave side of each wing. As the opposite side of each wing was convex, they would meet with less resistance than if they were entirely flat, or were not warped. There were as many as six or eight wings. This wheel was surrounded with frame work and boarded up on all sides, except where there were doors, which were opened to admit the wind, when it was blowing from any direction; or they could all be closed, when it was desirable to have the wheel stand still. More than this, the outside frame and ceiling was built with its sides diverging from every door, for the purpose of directing a greater amount of wind into each door, than would enter were the sides only even with the door.

There was no little ingenuity displayed in its construction; and it was said to subserve a very good purpose. Of course it is necessary to open other doors when the wind changes, and when it blows furiously, a door may be open just enough to keep it in slow motion.

Our next call was at the residence of Mr. Reed, who was absent; but we had the pleasure of seeing a very nice farm and some 10 or 12 most capital bullocks, which would weigh, probably, from fifteen to twenty hundred pounds each. Indian corn and pastures showed that the manure of the farm was not all allowed to be wasted.

Among his horses, we discovered a pair of twin mule colts, of good size, and so nearly alike that no difference could be perceived between them, in color nor in form.

Tompkins Ditcher.

Having frequently heard that a Mr. Tompkins of Clifton, had recently invented a ditcher, with which one horse would cut eight rods per hour, we went to see it. He has expended about eight hundred dollars, he said, in bringing it to its present state of perfection.

It is a very complicated, clock-work-like implement; and it would not be practicable to give very much of an idea of it, without drawings of different parts of it. It is sufficient to say, however, that it is a *self-propeller.* The machine is supported on four wheels, with two large drive wheels, nearly five feet in diameter, and rims six inches broad, with the peripheries well ribbed, to prevent their slipping. Between these wheels is an upright iron shaft, of four-inch-round iron, to which the lever is attached. The horse, or two horses, when hitched to the lever, travel around the machine, and cross the ditch in rear of the machine over a plank, which covers the ditch and is drawn along with the machine. There are several systems of cog or toothed wheels, so connected with the shaft and the lever and the drive wheels, that, at every circuit of the horse, the entire machine is propelled forward from one to two inches.

The digging is performed by means of a system of scrapers or hoes attached to an endless chain arrangement, which can be elevated or depressed to any desired depth. The forward movement of the machine presses these scrapers into the earth, which they bring up and throw behind them, and it is then carried to either side of the ditch, which is about six inches wide.

I would not pen a word to dishearten the persevering inventor; but for those who may be anxious to know more of its efficiency I may be allowed to say that for ditching, where there are no small stone, it will probably subserve a good purpose; but its complexity and expense will be a great hinderance to its general introduction. The more simple any machine is, the less liable it is to become deranged in any of its parts, and as a general rule, for such purposes as ditching, the greater will be its effectiveness.

The principle which is disclosed in the construction of this machine is a good one, and I am quite disposed to think that by dispensing with a good portion of the clock-work gearing, and by substituting a worm and pinion for obtaining a slow motion, and by dispensing with three-fourths of the dirt scrapers on the endless chain, or dirt carrier, and by attaching a few diggers to the endless chain for digging up the earth, it would operate far more effectively than so many small scrapers.

Our intention was, when in this vicinity, to call on Gen. Harmon, who has experimented so extensively in the cultivation of wheat, but the day was too far spent, and so we returned to North Chili, passing many fine and, to all appearance, well cultivated farms, and a great number of neat and commodious residences, with yards very tastefully arranged, with surroundings in abundance to render a farmer's home attractive and cheerful, and a still greater number of good barns and outbuildings, all of which appeared in good order.

Here we pass a large field of Marrowfat beans, which look fine, and promise to be a very remunerating crop. Judging from the appearance of the farm, and the location of some of the new outbuildings, the plans for a yard and residence are still in embryo, and if appearances are not deceitful, the proprietor is a *progressive* farmer.

Away off in the distance my friend Davis pointed out a very elegant barn, which received the first premium from the New-York State Ag. Society. A little farther along we passed a very spacious and neatly constructed barn, painted white, belonging to the farm of Mr. Harmon.

In that vicinity I was informed that there are a large number of good cattle raised, and most of the good farms showed that their manure is judiciously applied to the soil, although many good farmers who *aim* to save all their manure lose a large portion of it by a yard improperly constructed.

Steaming Food for Stock.

My attention was directed to Prindle's agricultural caldron and steamer, for which my friend Davis was agent, who informed me that a good number of farmers in that vicinity were intending to give them a fair trial during the approaching winter in steaming food for their neat cattle and other stock.

These caldrons and steamers are manufactured in Rochester. It cannot be denied that they make a very nice apparatus for steaming food with; but they are quite too expensive for farmers of ordinary means. But very few farmers can, or will afford to pay $30.00 or $40.00 for an apparatus to steam provender with, for neat cattle or for horses. Those who have really made up their minds that it is a paying operation to steam straw, hay and cornstalks, can construct a good and convenient apparatus for this purpose, for five or six dollars; and even then, a man would need to keep more stock than most farmers are accustomed to keep, providing he was under the necessity of employing a man to do his chores.

I am quite inclined to believe that it would be far wiser and better policy for farmers to take more pains in erecting good barns and sheds and stables, and to take more pains in securing their hay and straw and stalks, and endeavor to have them in a more edible condition for their stock, than it is to attempt to render poor hay, poor straw, or poor stalks more palatable and nutritious by steaming them. If there is but little nutriment in hay or straw—if it be weather-beaten and mouldy, steaming may improve its palatability a little; but it will not make good feed of it. S. Edwards Todd.

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[For the Country Gentleman and Cultivator.]

POUDRETTE FACTORY.

Editors of Co. Gentleman—Three years ago I built a vault under my privy, 6 by 8 feet and 5 feet deep, by bricking up the sides, and covering the bottom, and a foot or more of the sides with Hydraulic cement, and in this, after clearing in the spring, I throw a horse load of muck, that is fine and dry, and from time to time we throw in more muck, so that when we clear it out, there is some over a cord of manure.

We are careful to empty all the vessels into the vault. When we empty the vault, we remove the manure to a tobacco shed, and mix in as we deposit the mass, some 3 barrels of ashes. Before using it we generally throw it over twice or three times.

It is generally by this time so fermented as to be fine, and most inodorous, so much so that a man can take it in his hands to apply it without offence. We have always used it in the hill for tobacco, instead of superphosphate, and have thought the effect better upon the young plants than anything that we have ever used.

There is only one thing in regard to the composting that troubles us, and that is, it seems we lose a large quantity of ammonia whilst the mass is fermenting. Do I need to apply plaster, and if so how much and when?

I have thought that the Poudrette was of as much value to me, as from 15 to 20 dollars worth of the best superphosphate would have been. J. M. C.

To prevent loss by fermentation, use less ashes, or more muck or both—and if necessary, add thin layers of dry loam or clay. The thinner and more frequent the layers of the muck, the more perfect will be the intermixture, and hand labor will be lessened. The mode of management described by our correspondent is excellent—we need hardly add that it is of great importance to have the muck very well dried, in order that its absorbent powers may be brought into full action.

New-York State Agricultural Society.

Pursuant to previous notice the Society met in the Assembly chamber at noon on the 12th ult.—the President, Mr. GEO. GEDDES, in the chair. Hon. MARSHALL P. WILDER, Ex-President of the United States Ag. Society having been invited to a seat by the side of the chair, briefly acknowledged the courtesy. The Treasurer's Report was then read, of which the following figures present a brief abstract:—

REPORT OF LUTHER H. TUCKER, TREASURER.

RECEIPTS.

Cash on hand from last account,	$1,792.71	
Memberships at Annual Meeting,	48.00	
Life Memberships during the year,	70.00	
State Appropriation,	700.00	
do. do. for Dr. Fitch,	1,000.00	
Interest,	11.12	
Local Committee at Watertown,	800.00	
Receipts at Watertown Fair, including $106 for Life Memberships,	7,900.40	
	$12,322.23	

DISBURSEMENTS.

Premiums at Winter Meeting,	$576.00	
Expenses at do.	43.54	
Premiums and Expenses of Previous Fairs,	122.50	
Salaries and Travelling Expenses,	2,865.13	
Salary of Dr. Fitch,	1,000.00	
Incidental Expenses,	126.93	
Postages,	177.67	
Library and Museum Expenses,	82.29	
Printing, Stationary, &c.,	385.28	
Premiums, &c., Watertown Fair,	4,722.09	
Expenses Watertown Fair, for Gate-Keepers, Day and Night Watch, Police, Laborers, Clerks in Offices, &c.,	1,122.31	
For Superintendents and all other Fair Expenses,	955.80	
	$12,179.54	
Cash on hand to new account,	142.69	
		$12,322.23

On motion of Mr. J. STANTON GOULD, a vote of acceptance was taken, when Mr. B. P. JOHNSON, Corresponding Secretary, proceeded to read the Report of the Executive Committee for the year just concluded.

After a few brief and appropriate remarks upon the condition of the country as exerting an influence upon the agriculture of the State, this Report refers in detail to the events in its progress which have occurred during the past twelve months; the deaths of several of the former officers of the Society; the labors of Dr. FITCH, its Entomologist; the character and success of its last Fair, &c., &c. The increased importance of wool growing, and the recent efforts to perfect the processes of flax manufacturing, under the scarcity of cotton, are mentioned; the appearance of the pleuro-pneumonia in this vicinity, and its apparent extinction in the course of the season, are alluded to; considerable space is devoted to the important subject of agricultural statistics, and the hope expressed that the legislature will take favorable action upon the bill which has been introduced for their collection throughout the State.

The usual nominating committee of three from each judicial district was appointed, upon whose report through their chairman, Mr. KELLY, the following officers were duly elected:—

PRESIDENT.

EZRA CORNELL of Tompkins County

VICE-PRESIDENTS.

1. Thomas H. Faile of New-York.
2. Samuel Thorne of Duchess.
3. Herman Wendell of Albany.
4. Oscar Granger of Saratoga.
5. Solon D. Hungerford of Jefferson.
6. Thomas I. Chatfield of Tioga.
7. Patrick Barry of Monroe.
8. Samuel W. Johnson, of Cattaraugus.

COR. SECRETARY.

Benjamin P. Johnson of Albany.

REC. SECRETARY.

Erastus Corning, Jr., of Albany.

TREASURER.

Luther H. Tucker of Albany.

EXECUTIVE COMMITTEE.

T. C. Peters of Genesee; E. Sherrill of Ontario; A. Hubbell of Oneida; C. I. Hayes of Otsego; W. Newcomb of Rensselaer.

A recess was then taken until 7 P. M., when, after the presentation of some resolutions by Mr. P. M. Wetmore of New-York, which were laid on the table for discussion by the Society at their meeting on Thursday, a valuable letter was read from Dr. FITCH, who was unfortunately prevented by illness from being present in person. The president introduced Hon. HENRY S. RANDALL of Cortland, who was present at his request to read a paper upon sheep raising and wool growing. Mr. R. then occupied upwards of an hour in a summary review, particularly of the Fine Wooled Sheep of the country, their introduction, character and successful improvement. This paper included several extended tables, and much information gathered from the previous writings of the author and others, as well as by his recent observations in this and other States, and by correspondence with our best sheep breeders. Biassed strongly in favor of the fine wooled breeds, few advocates of that class of sheep could have made out a stronger argument in its favor.

At the conclusion of Mr. Randall's essay, Mr. Kelly, seconded by Mr. Peters, moved a vote of thanks and that a copy of the paper be requested for the Transactions of the Society. Adopted.

Thursday the usual exhibition of Grains, Dairy Products and Fruits, together with a number of improved Implements, were on view at the Society's rooms; and the usual discussions were conducted in the Lecture Room of the Society, the President, Mr. Geddes, in the chair, on Thursday, when the attendance was quite good.

At the evening session the Reports of Committees were read by the Secretary, declaring the award of premiums for Farms, Crops, Seeds, Butter, Cheese, &c.

Mr. GEDDES, the retiring President, then delivered his valedictory address, which was devoted to a review of the progress of Agriculture during the twenty-one years that have now elapsed since the Society first entered upon its present career of active usefulness. Mr. G.'s remarks will be issued at once in pamphlet form. Mr. GEDDES then introduced his successor, Mr. CORNELL, who followed in a brief and appropriate acknowledgment for the honor conferred, and expressive of his determination to put forth every effort to render the term of his office, with the assistance of his coadjutors, no less successful than the previous career of the Society under the guidance of the eminent men who had preceded him in the same responsible position.

At the conclusion of Mr. CORNELL's remarks, and after a vote of thanks, on motion of Mr. HUNTINGTON, to the speakers for the addresses delivered, a resolution was passed upon motion of Mr. JOHNSON, commending to the favorable notice of the Legislature, the bill now before the House for the collection of Agricultural Statistics; and, upon motion of Hon. WM. KELLY, that, in view of the great value to the agricultural community of Dr. FITCH's Entomological investigations, and especially of those in which he has been recently and is now engaged, the continuation of the present annual donation by the State to support these investigations, should not be overlooked or omitted in the appropriations of the present winter. A desultory discussion followed, in the course of which Mr. CONGER presented to the Society several pamphlets explaining a new process of unbranning wheat before grinding for flour, which we shall hereafter refer to more particularly.

The Society then adjourned, after a pleasant, harmonious and useful session, which, if not so fully attended as has sometimes been the case, had drawn together a fair representation from various parts of the State, including many of the oldest and warmest supporters of the Society's operations.

[For the Country Gentleman and Cultivator.]

EXPERIMENTS IN POTATO CULTURE.

Messrs. Editors—In answer to your call for *facts* in regard to the proper time for digging potatoes to avoid the potato disease, I will add my mite by giving you the result of my experiments with the *white* Mercer potato the past season.

I planted six acres with them; the land was a sandy loam, that produced the year previous 160 bushels of ears of corn per acre, by a liberal application of barnyard manure on the sod, and 200 pounds of guano per acre in the hill.

Plot No. 1.—One acre, planted April 8th, with seed cut from large potatoes, 13½ bushels, in furrows 2½ feet apart, manured in the furrows with 140 carman loads of New-York stable manure and 575 pounds of Peruvian guano, the seed dropped upon both and covered with the plow. Dug Aug. 12th. All sound—yield, 236 bushels.

Plot No. 2.—One acre, planted April 9th, seed the same kind and quantity, 140 loads stable manure, and guano in all but eight rows, at the rate of 366 pounds per acre; four of the eight rows with wood ashes spread upon the manure at the rate of 200 bushels per acre. Dug Aug. 19th; all sound—yield, 248 bushels.

Plot No. 3.—One acre, planted April 15, seed from large potatoes, 14 bushels, 100 loads stable manure and 350 pounds of guano. Dug Aug. 22d; all sound—yield, 199 bushels.

Plot No. 4.—Three-quarters of an acre, planted April 19th, seed cut from medium sized potatoes, at the rate of 14½ bushels; stable manure at the rate of 100 loads, and guano at the rate of 400 pounds. Dug Aug. 28th; very few diseased—yield, 117 bushels, or at the rate per acre of 156 bushels.

Plot No. 5.—One acre, planted April 23d, seed from medium sized potatoes, 14½ bushels; 110 loads of stable manure and 350 pounds of guano. Dug Aug. 30th; very few diseased—yield, 137 bushels.

Plot No. 6.—One acre, planted April 25th, seed from large potatoes, 14 bushels; coarse hog-pen and barnyard manure, and 500 pounds guano. Dug Aug. 26th; very few diseased—yield, 127 bushels.

Plot No. 7.—One-quarter of an acre, planted June 4th, manured with guano alone. Dug Oct. 14, yield very light, quite two-thirds of the potatoes diseased; the remaining portion were considered nearly worthless, and were fed to the hogs.

In plots Nos. 1, 2 and 3, the first planted and earliest dug, there were no diseased potatoes.

In plots Nos. 4, 5 and 6, not to exceed half a bushel diseased, and those were found on the ends of the rows, bruised by the feet of the horses.

Plot No. 7, the last planted, was nearly an entire loss.

The difference in yield between Nos. 2 and 3 was caused by the difference in the quantity of manure used. Between Nos. 3 and 4, by the difference in the quality of the seed; where seed from large potatoes were used but 1-12th of the product were small potatoes; from the medium size about one-sixth of the product were small. Between Nos. 4 and 5, by the exposure of the seed in No. 5 to the heat of the sun some two or three hours before covering, which prevented about one-third of it from sprouting. Between No. 6 and those preceding, by the inferior quality of the manure. No benefit was derived last season from the use of guano or ashes, probably caused by the drouth in summer.

The test was in plot No. 2; four rows were left with stable manure alone, four more on the one side of them with the addition of wood ashes, and four on the other side of them with the addition of guano. There was no difference whatever in the quality or yield of the three parcels.

This differs greatly from the result of my experiment with guano in 1860, as noticed in the Country Gentleman of Dec. 13th of that year; the value of the increase to the crop that year by the addition of guano was more than five times the extra expense.

In another respect the two experiments differ; that year there was no difference in the yield or size of the potatoes raised from seed cut from large or medium sized potatoes; last year they differed in both size and yield.

In other respects the two experiments *do not* differ, and confirm me in the belief that I expressed in the former article referred to, that no *amount* or *kind* of manure would cause the potato to become diseased, and that the sure preventive is to plant as soon as possible in the spring, with early ripening kinds, and dig them as soon as they are ripe. If every farmer would adopt that plan, I am satisfied that we should soon hear no more of the *potato rot.*

That portion of the crop that was retained, was put in the cellar on the 30th day of August; they remain perfectly sound, not a single decayed potato having been discovered.

The greater portion of the marketable potatoes were sent directly from the field to New-York, and disposed of at $2.12½ per barrel.

Notwithstanding the drouth of the past summer, which shortened the crop of potatoes very much on Long Island, this crop was remunerative, paying the cost of manure, of seed, and of all labor bestowed upon it, estimating each day's labor of man or horse at 75 cents.

In addition to which one-half of the cost of the manure is justly chargeable to the succeeding wheat crop.

Matinecock, Oyster Bay, L. I. GEORGE R. UNDERHILL.

[For the Country Gentleman and Cultivator.]

Notes on Morris County Farming, N. J.

This part of Jersey is hilly and mountainous, abounding in valleys between, furnishing rich farms. While on a recent visit to Rockaway in this County, I was struck with the number of substantial stone walls, some of which are 4 feet wide at the bottom, and 3 feet at top. Stones are plenty in this part of the county, and much attention is paid to mining and carting ore. Some of the farms indicate thrift, but carting has engaged too much of the attention of the farmers for profitable culture of their farms, notwithstanding they have a good home market for almost everything a farm can produce, as the mines of iron require many laborers.

Mr. George Richards has been having a ditch some 4 to 6 rods long, and in the deepest place some 15 feet deep, to drain an old pond hole. He thinks of getting some 1500 loads of the first quality of muck, and as the canal runs near by, he buys his lime and has it mixed on the bank of the canal. I think he will see the effects soon.

Mr. A. Riggs of Drakeville, is an example of what industry and perseverance can do. He commenced life on the Morris canal, and after saving money enough, he bought a store, and has gradually bought land until he now has several hundred acres. Last year he sowed 80 bushels of buckwheat, and his crop of Spring wheat for 1860 was 600 bushels. He sowed superphosphate of lime with his wheat. Much of his land is so level as to be incapable of draining, and he, to get his spring crops in early, plows in the fall. He has bought considerable lots of woodland, employing many hands during the winter months. He thinks farming pays.

Mr. J. H. Crammer of this place, commenced life in New-York State, working by the month. He commenced saving, and soon raised enough to buy a farm by leaving part on bond and mortgage. He repaired his buildings, enriched his land, raised more grain than many farmers having twice the number of acres, and has now sold and bought a larger farm. He thinks farming pays. It will not be amiss to state that he had a prudent wife and no family; that makes a difference. Farming must be done economically and have good management, to make it pay; still industry and perseverance will accomplish much, and farmers need a good share of each to succeed.

J. T. H.

[For the Country Gentleman and Cultivator.]

COTTON GROWING IN THE NORTH.

BY A SOUTHERN TRAVELLER.

It would not be comfortable now to visit the south on any expedition for information concerning the peculiar products of their country; but we may go back to our old minutes and glean some useful hints from observations made in travels among them when we lived as brethren, looking to the same flag for protection, and prospering under the same guarantees of peace which it everywhere carried with it.

The question does not come up "whether we can grow cotton in the north?" That has been done for the last fifty years with good success. When the hardy pioneers of southern Illinois, and a small portion of Iowa, first removed from their southern homes, they found the climate congenial for cotton growing, and continued its cultivation for a long time. It has latterly been discontinued, more from economic than any other reasons. It has not paid at the low market rates. But it may be remarked in passing that there is nothing in the soil which stands in the way of success. The soil is rich enough in the elements necessary for perfecting the plant. The low lands along the southern rivers and branches are not more fertile than the American bottoms of southwestern Illinois, nor the bottom lands of many of the lesser streams. The wheat lands of southern Illinois are far richer than the upland cotton fields of Alabama. Their tillage is better, and the men who cultivate them work with a will and an intelligence which pledge victory before hand.

The best cotton lands of Tennessee are not unlike the wheat lands of Macoupin, Shelby, and other counties of Egypt. In northern Mississippi there is a superabundance of sand, which gives sure returns for a few years, yet after that the soil feels the great exhaustion of the crop, and becomes worthless. Already there are large tracts of land in that section "turned out to rest," as the planters have it, every few years, and they lie for one, two or three successive years. Or, as is now common, wholly abandoned to grow up with weeds and shrubby trees, like the abandoned tobacco lands of old Virginia. This is the case even in Fayette county, Tennessee, the largest slaveholding county in or out of the Union, and in which the lands are proverbially strong. It also holds good in the neighborhood of Gen. Jackson's farm in northern Alabama, (a farm that he possessed after driving out the Indians.) The lands here are of a reddish or a deep chocolate color. There are no better uplands by nature on the continent, and none that have endured bad culture better. Yet twenty years of "cotton and no rest" have overdone them. Now they are taking their rest.

The planters have seen and lamented this exhaustion of their soil, and during the times when wheat was worth $1.50, $2.00 to $2.50 per bushel, as in 1856, they commenced growing a crop of wheat every two or three years. This was to "*rest their lands*," as they said. No grass seed was used, or but very little. They thought it killed out by the hot summer suns. Yet I do remember of seeing a few very fine patches of red clover, and am satisfied that some similar alternation of crops will be found necessary in Illinois to preserve the fertility of our cotton growing lands.

The cotton plant requires deep and thorough cultivation and a long season of fine growing weather, exempt from frosts.

It must be started as early in the spring as possible, consistent with its safety from frosts—tended constantly during the season to check the rampant growth of weeds, and the cotton gathered as soon and as fast as the balls open. Whatever means would favor early corn planting would facilitate early cotton planting. Therefore the ground should be prepared in the autumn previously.

Excessive wet and cold weather is very unfavorable; hence the trench plow should be used, to deepen the soil stirred, and permit the surplus water to settle away from the roots. We would add the subsoil plow in the same furrow, but it is scarcely worth while to talk about that on any large scale in a State where subsoil plows are not used. If there are any wet, springy places in the field, they should be underdrained. Underdrianing the whole field would be useful where practicable.

From these general remarks let us descend more to the detail.

The first important step is *selecting the field*. A rich alluvial or loamy soil is the best. As it will be necessary to guard against frosts, and to bring the plant to maturity within that of late spring and early autumn, an admixture of sand would contribute to a rapid growth and make success surer. In the selection of a field avoid one that is known, from any reason, to be a *frosty* spot. It matters not from what causes these objections might arise, whether cold, wet, springy soil, exposure to the drafts of cold air, or the settling in of chilled vapor from frosty currents. On the other hand choose a deep, warm, quick, mellow soil, from which, or through which, the surface water flows rapidly. Select a field known for its freedom from frosts, let it have a southerly aspect and a moderate elevation.

Planting.—We cannot fix a day when cotton planting should commence. The time will vary with every degree of latitude and with every neighborhood. It should be planted as early as it can be and not be liable to exposure of frost. North of the Ohio river planting should take place in the first and second weeks of May, varying, of course, with the season. In the south planting commences in March, and the latest ends in June. A slight frost withers the leaves like buckwheat, and utterly destroys the life of the plant. The plowed ground is usually thrown up in ridges, by turning two furrows together. The distance of ridges apart varies from three to four feet. The seed is dropped in drills; a large quantity is used, and afterwards thinned out at the first and second weeding to 8 or 12 inches apart in the rows. There is nothing essentially different in the cultivation of cotton from that of corn. The points to be observed are keeping the weeds in subjection, and the ground well stirred constantly from the time the plant has made its appearance until the branches obstruct the passage of the mule, or the flowers are in full bloom.

The picking is simply performed. As it must be done as soon as the balls open, and as they mature irregularly, the pickers must go through the "patch" several times. They gather the cotton dry, and deposit it in a safe place till the ginning commences.

As the labor which follows is purely mechanical, we will leave that work to those who may choose to purchase gins and undertake the business as a distinct branch of manufacture. The price of a gin depends on the number of "saws" it contains, and varying from something less than $75 to $275 each. They are prepared with pullies for belts, and may be driven by horse power used for threshers, or by any other mode desired.

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☞ A "New-Jersey Farmer" writes us in a recent letter that the farmers of that State are beginning to ascertain that after its first cost, the expense of keeping good stock is little or no greater than that of keeping "sealywags." He refers to the Advertising pages of the Country Gentleman as forming an interesting and exceedingly useful directory to those wishing to purchase, and a valuable means of disseminating improvement. He speaks very highly of Mr. J. C. Taylor's recent South-Down importations, but not more highly than they doubtless fully merit. He also mentions very favorably the flock owned by Mr. J. McCain, who has bred his South-Down ewes to the rams of Mr. Taylor, and who has also valuable Cotswolds and Leicesters derived from leading Canada flocks. Mr. McCain also breeds Essex and Suffolk pigs.

— We may add to the foregoing, that we have heard of several recent sales of Live Stock effected through Advertisements in the Country Gentleman.

[For the Country Gentleman and Cultivator.]

NORTHERN OR PEA-VINE CLOVER.

L. Tucker & Son—I see an inquiry in the Co. Gent. of Jan. 2, page 16, about clover; and, without attempting to answer that inquiry, will tell my experience with the Northern or Pea-vine Clover, and can say for myself it is the right kind.

In the spring of 1860, I procured from Wm. Thorburn of your city, a bushel of the China Tea Spring Wheat, for which I paid $2.25, and if I recollect right 16 lbs. of the Pea-vine clover seed. This I sowed on about two acres, (too thin,) which came up and looked much as other clover till last spring; then it was later starting than the other, but when it got fairly started, it grew wonderfully, and when I cut it, it was down, but not like the other clover when it gets down, but it was all down and twisted to the "four winds;" still it was kind of propped up, so that it was not down flat on the ground. I had two hands mowing about a day and a half, and they got along so slowly, that I quit till we could get up what was cut; then went to hauling, and when it was forked up, (for raking was useless,) of all the crops of hay I ever saw, that took the lead, and we hauled eight large two-horse wagon loads that were loads, for it was long and stuck together so it would hang nearly the length of a winrow, and I am satisfied there was not less than five or six tons (but I have forgotten the rule for measuring hay in the mow) off of one and one-fourth acres.

I measured some stalks that were five feet and nine inches long, and well branched. Some no doubt will say, well it is coarse hay, and so it is, but I find my horses eat it very well; indeed, I think it is better than a large growth of the other variety, for the stalk is but little larger and is hollow and not near so hard. My horses eat it up very well, and do not waste one bit of it. I have been feeding four horses all fall and winter so far, from the product of the one and one-fourth acres, and am not near the bottom yet; so I think it will be cheaper to raise hay that way than to let the poor horses run out through the inclement season to get their living from the wheat fields, fence corners, &c., as some do, and then when solicited to subscribe for an agricultural paper say, "Oh no; I can't do now near so well as I know, and such or such an one has been sadly humbugged or misled by the teachings of such papers. I don't want anything to do with them"—but now would be glad to get seed of my clover, which I obtained a knowledge of through the Co. Gent. Have taken that paper now seven years, and would not take ten times the cost of it for this one item of information.

I saved the remaining three-fourths of an acre for seed, and would be glad if I had as much more. I intend to stock my farm with it. It will certainly be the cheapest manure we can apply; beside it looks better to grow clover four or five feet high than as many inches, and it is much more pleasant to get four tons of hay from an acre than to go over five or six acres for the same amount; and by saving the usual number of acres for meadow, we can let half of them run, which would, if turned under by a good plow, make a capital prospect for wheat, and be as good as a deal of hard work hauling out of manure.

Mine was sowed mostly on good ground, but a part was thin—one bank that would not, I suppose, grow the other clover more than six or eight inches high, made this from two to three feet, and very nice feed. It branches remarkably, and so makes a great many heads and leaves. If, as has been said, it does not heave or pull out by frost, I shall think it one of our very best crops—the best introduced hereabouts lately. My experience with it is only one season, but saw no signs of heaving out of the ground last spring.

I also think well of the China Tea wheat. We find it makes a very fine flour and bread.

Sugar Grove Nurseries, Barnesville, O. JAMES EDGERTON.

[For the Country Gentleman and Cultivator.]

CORN CULTURE---DRILLS vs. HILLS.

Messrs. Editors—Reading in the Co. Gent. of Dec. 19, p. 394, "Tape Line's" article in reference to corn in hills or drills, set me thinking upon that subject, and having had corn planted in both ways this season, thought I would look over my accounts, &c., and give my experience through the columns of the Co. Gent. "Tape Line" says that "J. L. R. confounds the question of whether corn will ear better, or yield the most, when planted in hills or drills." In my estimation the latter is the main question, and to raise corn, not fodder, is the object of the generality of farmers when planting it. The *better* piece for corn was planted with the drill upon the 3d and 4th days of May; tended with the common five-tooth cultivator and shovel-plow, being hoed twice and thinned out at the last (24th to 28th of June,) to not less than eight inches. The piece planted in hills was much poorer soil, planted upon the 21st and 22d of May, four spears to a hill; tended same as the other, costing about $1.75 less per acre than that in drills, not counting cutting and husking.

Upon measurement I found that it required, (taking an average of several bushels,) 115 ears of the drilled and 83 of that planted in hills, to make a bushel, or about one-third less. Both were sorted at husking.

Now every farmer knows that it takes just as long to husk a small ear as a large one; consequently every bushel of the drilled cost one-third more to husk than if the ears had been the same size as the hilled; and that in hills is a much better quality of corn, and where not destroyed by cut-worm, yielded more bushels per acre.

"Tape-Line's" theory in regard to the roots seems as though it ought to be correct; but will it agree with the practice of those who have tried both systems *thoroughly?* I presume a good many of your readers would like to hear from some such person upon that subject; this being my first season, I am literally a Young Farmer.

Huron Co., Ohio, Jan. 11, 1862.

[For the Country Gentleman and Cultivator.]

CUTTING SWAMP BUSHES, &c.

Perusing in your last paper the communication of Mr. Gove, who says he is 75 years old, in which he states that the bushes should be cut down on "the old of the moon in August, when the sign is in the heart," which I presume few could peruse without a smile at this new "*moonshine*" story. I desire to say a few words on the subject. This is not a question of date, or of the moon's changes, but it is a question with which the sun has something to do. What is the object intended? It is to deprive the roots of brush as far as possible, of the nutriment (sap) which is requisite for its development of new shoots. The period to be selected for the operation of cutting off bushes should thererefore be that at which the sun's heat has most fully developed the growth, and when there is an apparent cessation in the formation of new wood. This period every one can decide upon for himself by observation. At this time there must necessarily be more of the sap in the branches than at any other, and by cutting off the bushes close to the ground, the root can receive no return of the sap that has been elaborated, and is so weakened as to be incapacitated to send forth any but very feeble shoots; perhaps none at all. Wm. R. Prince. *Flushing, N. Y.*

Good Crop of Wheat.—Mr. Wm. Woodburn of Cumberland County, Pa., writes to the Country Gentleman, that he harvested from 16 acres and 150 perches land, last year, 527 bushels of wheat by measure, or 542 by weight. The land was a clover fallow, and the wheat, the old Mediterranean. The certificates of surveyor and thrasher were furnished to the County Ag. Society. Such a yield should, as Mr. W. says, encourage farmers to greater efforts to secure good crops.

[For the Country Gentleman and Cultivator.]

How to Grow a Permanent Osage Hedge.

Luther Tucker & Son—In compliance with your request, and for the information of others, I now proceed to give a minute description of my experience and mode of planting and cultivation of the osage orange as a fence. I give the preference to plants one year old. In trying to raise them from the seed I have been unsuccessful. I would rather leave that matter to the nurserymen.

Setting the Hedge.—For this purpose the ground should be broken up to the depth of from 12 to 14 inches, according to the quality of the soil. The space broken up at least 10 feet wide, and that with the plow, leaving the open furrow where the fence has to be set. If there is any thin soil in the row, it should be well manured. It should not only be plowed, but subsoiled, harrowed, and thoroughly prepared. The land again to be plowed gathered into the open furrow—also made smooth with a rake. The hedge then to be set in the centre, which would leave five feet to be cultivated on each side. When a hedge is to be set along an old fence row, it is much better to have the fence removed the year previous, and the ground broken up and cultivated. It would then be in a better condition to receive the hedge. After the ground has been fully prepared, it is necessary to stake off the row and draw a line to work by. The holes to be made to insert the plants, to be made with a steel dibble, 12 inches in length, and 2½ or 3 inches in diameter at the top, with a socket in which to insert a handle 2 feet long, to make the holes, which should be 6 inches apart. The plants then to be put into the holes about an inch deeper than when they were in the ground in the nursery. The earth to be well pressed about the entire length of the root. Putting the plants in well, when transplanting, is one of the most important matters in having the hedge well started. Too much care cannot be taken in this particular.

Then comes the cultivating, hoeing, plowing, &c. The soil on both sides of the hedge wants thorough cultivation, and the hedge row should be kept clean during the whole of the summer season. No stock should be allowed in the enclosure for the first and second years, without a protecting fence alongside. This protection should be continued for three years; after that it will protect itself.

Cutting the Hedge Down.—The next spring, which will be one year from the time the hedge was set, it must be cut off three inches above the ground, just above the root where it has a yellow appearance. The roots will then swell up and put forth a number of strong shoots just at the top of the ground. It then needs to be thoroughly cultivated about three times during the season.

The next cutting, which is at 2 years old, 12 inches, and so on at 12 inches each year, until it is 5 feet high, which should be the standard height.

By this process of cultivating thoroughly and cutting down severely, we at once form a strong, close and firm base, and if this process is rigidly carried out, success is certain.

It is thought by some that it is necessary to cut down more than once during the summer. In my opinion this is a great mistake. All that it requires is pruning once a year, late in the fall when the leaves drop off. This fact I have fully had demonstrated in my own experience. The ground alongside should be kept in good condition until it is four years old, when it will take care of itself. It will be found that much less training will be required after the hedge is full grown.

The first cutting, which will be one year from the time the hedge was set, can be done best with a pair or shears. I recommend the shears because it is difficult to cut plants off sufficiently low with anything else. The second, and all other cuttings can be done with an English hedge knife, which can be procured at any of the seed stores in New-York. The best way to do this is to walk along with the hedge on the right hand, making an upward stroke, cutting to the centre of the hedge. When you get to the end of the row, turn round on the left, and come back upon the other side. By this method a man can trim upwards of 100 rods per day.

This is a plain statement of my practical operations in growing the hedge. If it should be found of any use to the public, I am very happy in being able to give it to them. Thos. Bell. *Eatontown, N. J.*

[For the Country Gentleman and Cultivator.]

Experiences with the Water Ram.

Messrs. Editors—You ask for experience with the hydraulic ram. For the benefit of X. Y. Z., I will inform him that the article (without "wool,") *is reliable.* I have one, carrying sufficient water for my stock and much to spare, up an elevation of 15 feet, and a distance of 350 feet, to my barn-yard, costing all told, $30. It has been running over four years, "day and night." It would be a great sacrifice to be compelled to dispense with it. J. W.

Messrs. Tucker—For the benefit of your Ohio correspondent X. Y. Z., I give my experience with a Hydraulic Ram which has been in operation nearly 14 years. It is No. 4, and manufactured by W. & B. Douglas of Middletown, Connecticut. The drive pipe from spring to ram is 1½ in. calibre, and 30 feet long, and weighs 5 lb. to the foot, and cost 8c. per pound. Cost of ram $12, and expense of repairs about $4. The discharge of water from the ram is 3 feet and 4 inches below the spring where the drive pipe receives the water. The small pipe discharges 396 gallons in 24 hours, at a height of 18 feet above the ram perpendicular ascent, but 19 rods from ram by course of small pipe. It supplies my house, and the surplus runs to my barn, watering 23 head of stock and one horse. I have no doubt that enough water runs to the barn to water 75 head of stock both large and small.

I would say to your correspondent that the little fellow never tires out, but works on both night and day, and day and night. I would also say to X. Y. Z., if you have a good location for a ram, get one by all means, for he will work for less wages by a great deal than you can get your water brought to you in any other way.

Deerfield, Mass. JAMES CHILDS.

[For the Country Gentleman and Cultivator.]

MAKING MAPLE SUGAR.

Messrs. L. Tucker & Son—I notice in your paper of the 23d of Jan., an editorial on the subject of making Maple Sugar. In general your remarks are sound, but I would like to add my experience.

I find that the addition of a teaspoonful of salt to each 100 lbs. of sugar improves the taste of the sugar. It gives it a fuller taste. Salt is also good when used in syrup.

I don't use anything to clarify the syrup; if strained before boiling and skimmed while boiling, it will be of good color and free from all impurities. Trees that have large bushy tops will yield the best sap.

When nails are driven in the tree to hold the buckets, they should be drawn and saved for another year, and save the chopper and the sawyer some loud and harsh words, when the trees are used for wood or lumber. Ausable.

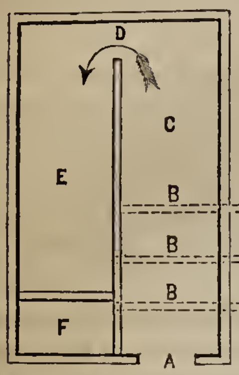
Another Good Pig.—N. E. A. of Orangeville, Ohio, writes the Co. Gent., page 81, in reference to Mr. S. Brockway's pigs. I killed a litter of grade Suffolk and Berkshires, November 3, that was dropt May 1, six months and two days old; thirty hours after they were killed one of them weighed 271 pounds, and is a trifle ahead of Mr. Brockway's. My pigs were fed on milk, dry corn, and provender meal, all they chose to eat. I received the 2d premium at the New-York State Fair—entered as small breed. Should Ohio, or any other State than New-York, beat ours, you may hear from my near neighbor, who received the first premium on a litter of eight pigs of the large breed. Daniel Parker. *Jefferson Co., N. Y.* [We remember very well those "large breed" pigs which took the first prize, and should like to hear about them, whether Ohio challenges the information or not. Eds.]

Domestic Economy and Cookery.

[For the Country Gentleman and Cultivator.]

Improved Sap-Boiling Apparatus.

The annexed cut illustrates an improved form of arch for boiling sap, which is very highly spoken of by every one who has used it. It is very simple, and any mason of ordinary ingenuity can easily make one.



It consists of a double arch for two sheet iron pans, placed side by side. It is made wholly of brick, or can be built on the outside with flat stones.

A. is door for wood—B. B. B. three hollow cast iron tubes to lay the wood upon, extending through the wall at the right hand side. By having them cast hollow, the heat passes out into the open air, making them much more durable. They are three inches in diameter, and placed about six inches from the floor of the arch—C. pan—D. flue for passage of the fire—E. pan—F. chimney, or a wide stove pipe will answer as well. The space under pan E. need not be more than 12 inches deep, as no wood is placed under it. It should be raised about four inches higher, so that the sap after it becomes heated, can be carrried into the other pan by a syphon rigged with a faucet, so that the flow can be regulated.

The pan C. can be made longer than the other, but should not come quite out to the end of the arch, as the sap would be burned on the pan. A better way is to have the pans of the same size, so that they can be changed at the end of each boiling season, as the pan over the hottest fire will burn out much the soonest.

The operation of boiling sap in one of these arches, rigged as I have described it, is as follows:—In the morning fill both pans, and then build the fire. The sap in the pan C. will be boiling before that in the other; when it is, put your syphon in its place, and guage it so that it will just keep the pan C. full; then start the cold sap from the holder, (also fixed with a faucet,) so as to keep the pan E. full also.

This looks very well on paper, *but equally as well when in operation in the sugar bush.* The *advantage* of this kind of arch is economy of fuel. In the common straight arch a great deal of the heat passes up the chimney, the bricks of which are always so hot as to be unbearable to the naked hand, and when boiling in the night, I have often seen the flames *rising a foot above the top of the chimney.*

In the improved kind there is no such waste of heat, and it has been accurately ascertained that the quantity of wood that will boil sap for 100 pounds of sugar in the old, will boil enough for from 135 to 140 pounds in the new fashioned arch. A saving of from 35 to 40 per cent in the quantity of fuel, and the cost of preparing it, is worthy the attention of every one that makes maple sugar.

St. Lawrence Co., N. Y. ST. LAWRENCE.

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[For the Country Gentleman and Cultivator.]

The Sugar Orchard---Tapping Trees, &c.

Eds. Co. Gent.—The attention of your readers is very properly called to the business of making maple sugar. Tin pails, holding ten and I believe twelve quarts, can be made by the hundred for $32. They should be but little larger at top, only sufficient to admit one being put into the other. Experience has proved that spouts made of sumac or elder, are better than tin or iron. I would recommend again the machine for making spouts which I forwarded to the office of the Country Gentleman several years ago. It costs but 37½ cents. Every experienced sugar maker knows the spout should not extend in beyond the bark, so as to prevent the sap flowing freely from the first grain, where most of the sap circulates. The saccharine sap like tannin is next the bark. The instrument to which I refer will fit the spout to any sized hole from half to three-fourths of an inch. It will set close, and is not so easily removed as when made by hand; 100 can be sharpened in thirty minutes.

I request one experiment to be made to ascertain the extent the hole should be bored into the tree. Bore one hole with a 1½ inch auger 1 inch—fit a spout to this hole; then with a half or three-quarter inch auger, placed in the center of the large hole, bore in 6, 8 or 10 inches; a small spout can then be inserted through the large spout to receive the sap from the small hole Let the sap from each be taken into separate vessels. The small spout may be so long as to carry the sap into a pail outside of the other. Let the experiment be made on large sound trees; boil down the sap of 12 quarts of each.

Another experiment I wish tried: In all sugar works there are trees from which about equal quantities of sap run daily. I wish the trial to be made with one spout in one tree, and two or more in the other, but whether two or three, all to run into one vessel. My practice is to put but one spout in a tree; I believe as much sap will run from one spout as more, if the two spouts are placed as usual, within 4 or 6 inches of each other. By this practice one-half of the labor of tapping is saved, and what is more important, but half the injury is done to the tree.

I have works where the trees have been tapped 70 years in succession. The first was by boxing with an axe. The next process with an inch auger, making two holes in each tree six inches deep. The next improvement, three-quarter inch auger, two in a tree, three inches. Now half or three-eighths of an inch, two inches deep. It is evident the trees will be much less injured by the latter process.

The making of maple sugar is becoming a science, and a profitable business when properly attended to. I thought of making some remarks relating to the process of boiling, &c., particularly the evaporating process, which I believe will not be generally adopted. J. S. Pettibone. *Manchester, Vt.*

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WHEEL GREASE.

I wish you could give a good receipt for making *axle grease.* The farmers in my neighborhood, (Orange Co.,) and I among them, complain of the miserable stuff we buy in boxes, which becomes stiff and gummy in a very short time, and, of course doubles and trebles the friction, which it ought to reduce. J. C. *Orange Co., N. Y.*

For iron axles, castor oil is excellent. For wood, tallow alone does tolerably well, probably much better than the purchased grease mentioned—although we have known of some of the latter (composition not known) that does well. Some farmers prefer tallow in summer, and lard in winter; while others stiffen the latter for summer use by the admixture of a little flour. A mixture of black lead is now generally repudiated. Have any of our correspondents tried soapstone and lard? And what are the results of the experiments of those who have used different lubricating substances?

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RECIPE FOR CORN BREAD.

As a good deal is said about making corn bread in some of the papers, I will give your readers my way of making it:—

Take 4 cups of fine corn meal, 2 cups of flour, two-thirds of a cup of molasses, 1 teaspoonful of saleratus, and a little salt to suit taste. Mix *well* with a pint and a half of sour milk—bake in an iron basin, and steam it when cold.

Rhode Island. ECONOMY.

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Hint to Cart Owners.

A convenient way of raising the wheel of a tipup cart to grease the axle, or unfasten the body from the tongue, is to set a stick forward of the axle, under the side of the body, of suitable length to raise the wheel; then bear down the body and fasten to the tongue. The wheel is then ready to slip off at option. Abraham Wanzer. *Fairfield Co., Conn.*

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Good Blacking.—Boil three pints of beer with 2 oz ivory black. As it boils, put in a dessert spoonful of sweet oil, 2 oz. brown sugar and boil quitely till reduced to a quart.

The Poulterer's Companion.

[For the Cultivator and Country Gentleman.]

Keeping Poultry on a Large Scale.

By C. N. Bement.

Ever since the publication of the "American Poulterers' Companion," in 1845, we have been repeatedly applied to, in person, as well as by letter, for information in regard to the feasibility and management of poultry *on a large scale*—that is to make a profitable business of it—basing their calculations, no doubt, on the favorable accounts heretofore published, where from ten, twenty, to one hundred fowls have been kept, expenses and proceeds noted, showing a nett profit of from thirty-five cents to one dollar and over a head, as the result of one year. Now, say they, if one hundred hens can be made to pay one dollar each, why cannot 1,000 2,000 or 5,000, be made to pay at the same rate? A very reasonable calculation, but somehow rather difficult to accomplish.

We extract the following from one of the many letters addressed to us on the subject:—"Your article in the "Country Gentleman," (12th July, 1860,) on the "profits of fowls," has attracted attention, and in its perusal I have found both pleasure and disappointment—pleasure because of the statistics by which you prove that the rearing of fowls may be made a profitable pursuit—and disappointment in what you say 'you have never known any one to succeed that has attempted to make the rearing of poultry on a large scale profitable,' &c. The question is, how can I manage, myself, upon a place of five to ten acres, near some of our country towns, so as to make a good living therefrom? For several months we have cherished the intention of engaging in the raising of poultry and eggs for the New-York and other markets, proposing to keep a yard of one thousand fowls. My estimate has been, that five acres would be enough for this, and they would yield a clear profit of one dollar per head, equal to $1,000 per year. Your communication has alarmed me as to the correctness of my estimation, or rather as to the practicability of making so large a number sufficiently productive to derive a living therefrom. What is the cause of this difficulty? If Mr. Post can make 33 fowls yield him a clear profit of $75, why not the same yield according to the larger number of fowls? There must be some reason for this. What is it? If the same proportionate amount of diligence care and attention is bestowed in the one case as in the other, why not the same *comparative* result?

"If, therefore, a small number of fowls are profitable stock, and a larger number *un*profitable, where must the line of demarcation be drawn? Two hundred, three hundred, five hundred, or where? and what in your judgment is the greatest number that can be kept together so as to afford a reasonable assurance of a clear profit of one dollar per head? always presuming that the best personal attention is given them. Would it be prudent to commence with five hundred fowls? Would the additional presence of geese, ducks and turkeys, be objectionable?"

It is evident that when experiments have been tried with twenty, thirty, or one hundred fowls, the results have generally proved favorable; but from our experience, and from all the information we have been able to collect, no establishment *on a large scale*, has succeeded in this country. The only one of which we have any knowledge, that even *approached* success, was attached to the Astor House farm, situated in New-Jersey.

Some six or seven years ago, this farm was purchased for the purpose of supplying the Astor House with milk, poultry, eggs, fruit and vegetables. Seven acres were appropriated to poultry, which was divided into four sections, one of which contained one thousand hens and chickens. A poultry-house 200 by 40 feet, also divided into four parts, containing 1,200 nests for laying and hatching. The poultry included 2,500 hens and chickens, 250 ducks, 200 turkeys, with a limited number of geese.

In the yards were fifteen hen-houses, and no less than one hundred chicken coops, where hens with their broods shelter and keep to themselves their respective families of feathered fledglings.

It is well known that fowls are very fond of animal and vegetable food. Here they could indulge to their hearts' content. The principal food- the offal of the Astor House—which of course embraced the greatest variety of nutricious substances.

Everything went on prosperously for the first year or two, eggs and chickens supplied in abundance, and the enterprise seemed complete, and *promised* success, when a malady broke out among the fowls, and swept them off daily by hundreds. About this time we visited the establishment, and were shown a number of invalids in the different stages of the disease. It was at first supposed the fowls were poisoned, but on dissecting and subjecting the contents of the crop and intestines to analysis, no indications of poison were discovered, or symptoms of disease detected. This was five years ago, since which we have understood that the "fowl enterprise" proved a failure, and was abandoned.

Last summer while on a visit at Staten Island, we were informed that an old sea Captain had an establishment where he kept one thousand fowls, which he made pay, over and above all expenses, $1,000 a year. Now, this was just what we had long been seeking, and resolved to look him up and ascertain the truth by personal inspection. On our arrival, we learned, much to our regret, that *the* Captain had died a short time previous to our visit. On questioning the widow, we were informed that they had never kept more than from 250 to 300 fowls. In reply to a question we put to her, whether they found it profitable to keep so large a number of fowls, she replied, "*I do not know—think not.*"

From the foregoing it would appear that it is rather a hopeless effort or enterprise to make a profitable business in keeping fowls on a large scale.

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[For the Country Gentleman and Cultivator.]

ROUP IN POULTRY.

Messrs. Editors—Having recently built a new Poultry-house, and pulled down the old one, my fowls were assigned to the former as the only lawful abode or roosting-place. As this was built on the opposite side of the barn from the old coop, I thought it necessary to confine them in the new house till their attachment to it had become such that, on being let out, they would not insist on a lodgment in their former roosting-place.

In this house, with a large window and a latticed door on the South, admitting plenty of light and fresh air, my fowls were confined five days, supplied with corn, cabbage, fresh meat, pure water, lime, gravel, sand, and ashes. At the end of that period I noticed symptoms of disease among them, manifested by watery eyes, running at the nose, dullness and inactivity, loss of appetite, coughing, sneezing, gasping for breath from stoppage of the windpipe.

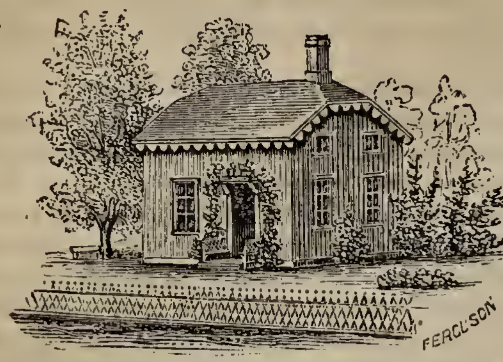
To the first three cases I administered two or three doses of pulverized alum in vinegar and water. This produced a violent coughing and sneezing, assisting in loosening and discharging the phlegm, as well as healing the membrane of the wind-pipe. These three recovered in three days. The disease went through the whole "house," and though of the thirty-six fowls but three received medical aid, not one has died, and they are all doing well.

Before being confined in the new house, my fowls had roosted all summer and autumn in an open slat coop with a tight roof. I infer that the change from running at large during the day and roosting in the open coop at night, to being confined in the less open house both day and night, as above stated, produced the disease.

So soon as I discovered this disease, the hens were let out doors, which was probably the best remedy. My conclusions, from closely observing the symptoms and nature of this disease, are that the Roup is similar to influenza in man; that it is contagious; that it is produced by sudden changes from freedom to confinement, from confinement to freedom, from dry to unusually wet weather, &c., and that the best remedy is the *prevention of the effects* of these changes on our fowls. Do not you concur with me in these opinions? I ask the opinions of Poultry-men on this subject.

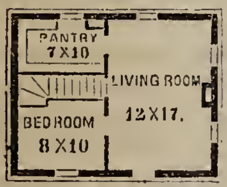
Yaphank, Suffolk Co., N. Y. ISAAC T. WHITBECK.

Rural Architecture.



DESIGN FOR A LABORER'S COTTAGE.

This Design is for a cottage of the smallest size, built where a cellar cannot be excavated, or where it would not be an object sought. The deficiency is in part supplied by a spacious pantry. A perspective view is given above. The plan nearly explains itself. A good closet, opening into the bed-room, is made under the stairs. Two rooms may be made above stairs, by running a board partition across the middle, and passing through one to enter the other.



This cottage is covered with vertical plank, matched and battened, and lathed within on corresponding battens. The only timbers are the sills and plates. In exposed situations, where more stability would be required to resist the force of wind, pieces of plank about two by three or two by four inches should be made to constitute the inner battens. This is effected by erecting these first, or before the siding is nailed on, by setting them up perpendicularly on the top of the sill, nailing them to the sill, and fastening them at the top by laying an inch board flat upon their upper ends, and nailing every one to its place through this board. The joists for both floors are simply nailed to these vertical plank, the lower joists resting on the sills, and the upper resting on a board extending around inside and let into these plank. This will make a solid and strong frame with little material and a small amount of labor.

If planed and painted, this cottage, which is only 18 by 23 feet, would cost about two hundred and fifty dollars; if made of rough boards outside and whitewashed, about two hundred dollars—varying, however, more or less, according to the price of lumber, labor, and other causes.—*Tucker's Illustrated Annual Register.*

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A GOOD GRANARY

J. J. Phelps of Avon, Ohio, gives the Co. Gentleman a description of a granary he has recently built, which he regards as an excellent one. The building is 30 feet square, and is large enough for a farm having 100 acres in tillage. It stands upon posts capped with inverted tin pans, as usual, for excluding rats—and which by the way should have no wire-rim, as the most intelligent among these animals sometimes catch to this rim and lift themselves upwards. A movable bridge admits driving a wagon into the building, loaded with grain. On either side of the carriage-way, are six bins, twelve in all, which are 5 by 8 feet, and 14 feet high, and each holding about 450 bushels,—the granary being thus capable of containing over 5,000 bushels. The bins extend up to the second story, and are filled by drawing the grain from the wagon below up through a trap door, by means of a wheel and axle on the end of a crane, which carries the grain to each bin and discharges it. The cost of this granary was 150 dollars. [The sketch furnished us is too imperfect to make an engraving from, and a part of the reference letters being omitted, it is not satisfactorily understood.] The grain is drawn off through openings near the bottom, closed with a slide.

Where a side hill can be selected for a site, a more convenient granary may be built with a bridge (a portion movable if desired to exclude rats,) passing into the upper story, so that a loaded wagon with grain may be at once driven into it and unloaded into the granaries above. On the lower side below, a wagon may be driven for reloading, by wheeling the bags by means of a sack barrow, or by drawing off the grain through an inclined spout. But the most perfect way of all is to have the granary in a three story barn, as described on pages 140 and 141 of the last Register—the grain passing at once from the fanning mill to the granary.

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LIGHTNING RODS.

Would you connect, on the roofs of houses, lightning rods from different chimneys—or would you prefer to run them straight to the ground, requiring three ground connections for as many chimneys? Also, would you advise running a rod into a well of water in daily use. B.

The best is a single rod, with the point extending upwards near the centre of the building, and the rod passing down by the shortest way. Itinerant rod erectors, who charge by the foot, find it to their interest to bristle the roof of houses and barns with many points, which are connected together by various horizontal pieces of iron, and then with the earth by one or more perpendicular rods. Each chimney is regarded as positively requiring its point, as shown in Fig. 1, and sometimes several more are added. If these are all perfectly firm and secure, so as never to become displaced, and are well connected with the horizontal portion on the roof, and with the downward one to the earth, they may answer the purpose. But we should much prefer a single rod in the centre, (fig. 2) supported by a small wood standard, (set in the ridge timbers,) and extending to the earth by bending along down the roof and side wall, in the rear. The expense would be also greatly diminished, inasmuch as one point and one rod are cheaper than several. All that it is necessary to observe is, the point of the rod should be one half as high above the tops of the chimneys, as the horizontal distance to them from the rod.

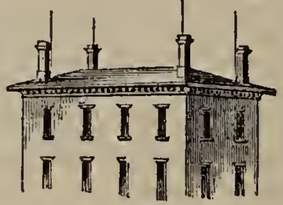
Fig. 1.

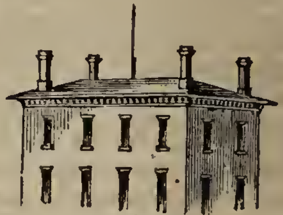
Fig. 2.

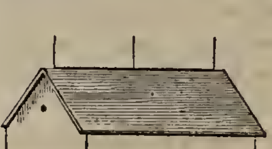
Fig. 3.

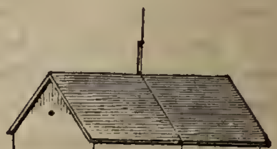
Fig. 4.

The same rule will apply to barns. Fig. 3 shows the way in which three points (and sometimes more) are commonly put up on such buildings. A much better mode is exhibited by Fig. 4—taking care to secure the requisite height.

If a rod always enters water, the water forms a good conductor to dissipate the fluid—but if the water is drawn off below the lower end of the rod, the latter may become a dangerous appendage, by drawing down the lightning without furnishing it a means of ready escape. On the whole, permanently moist earth, which may usually be found at a depth of six or eight feet, may be best.

The Horticultural Department.
A. J. Downing

Cultivating and Manuring Orchards.

Tree planters at the present time understand much better than formerly, the importance of good cultivation to newly transplanted orchards. Many of them have learned that fine, costly, valuable trees from the nursery, might as well be thrown into the brush heap for the fire, as left, in total neglect, to take care of themselves, after being transplanted. Setting out peach trees, especially in a grass field, or in a hard-crusted, weed-encumbered soil, is nearly certain death to them. Apple trees may possibly survive such treatment, but they scarcely grow for a long time. Even several years afterwards, the effect of cultivation is very striking. We have seen young peach orchards, five or six years old, standing in tall grass; the longest one-year shoots were not over three inches in length. Trees of the same age, under the best clean mellow cultivation, were making shoots three feet long. In other words, the latter grew as much in one year, as the former in twelve years. Intermediate grades of management,—cultivated but sown grain fields; short cropped pasture; soil plowed in spring, but neglected the rest of the season; these give results not greatly better than the meadow.

There is a curious influence exerted by the character of a thin surface, on the roots of a growing tree. These roots may be at the very first, *half a foot* below; yet, daily stirring but an inch of the surface, may quadruple the growth. Ten year old peach trees, in a loose subsoil, throw some of their roots two feet below the surface; yet if that surface is covered with a mat of turf, the roots of which are not found six inches down (as every plowman of sward has observed,) the growth of those trees will be nearly arrested; while a slightly plowed and frequently harrowed surface, will cause a rapid protrusion of shoots. These are the universally observed facts,—whatever the philosophy may be.

A peach tree never reaches any age, when the great difference between the influence of a grass surface or hard crust, and mellow culture, is not strikingly conspicuous. A peach orchard should therefore never be neglected, as long as it exists.

The roots of the apple, cherry, and standard pear, run down further into the soil than the roots of the peach, and consequently when they become quite large, cultivating the surface has less effect upon them. We have examined an apple orchard twenty-two years old, a part of it in pasture, and the rest plowed two or three times in the season, but not cropped. The soil is light; and the difference between the two portions is but slightly in favor of the cultivated part. If the tree had been but five or six years old, the difference would no doubt have been far greater; and the summer after transplanting, the shoots on the cultivated part would have probably grown two feet, and but two or three inches at the most, and probably not an inch, if standing neglected in grass.

The question is asked us, and this question has prompted these remarks—"When shall I know whether my full grown orchard needs plowing or manuring, or whether I should be satisfied with its present growth and productiveness?"

The answer must be—If the branches now make but little growth, so that the annual shoots are not more than two or three, or at most six or seven inches, the trees are not in a sufficiently thrifty condition. A more vigorous growth would give larger crops, and fruit of a finer and better quality; and a heavy product would not so soon exhaust their energies—they would recover from such temporary exhaustion more speedily. A shallow plowing of the surface, and a harrowing once a month for three or four times afterwards, will be useful, and much more useful on a heavy soil than a light one; but this will not probably be quite enough. An occasional top-dressing with a moderate coat of manure either in autumn or early in winter, will contribute to the vigor of the trees; and a load or two of ashes per acre, scattered broadcast under them, may be of great use, and cannot injure in any kind of soil. A scattering of lime, in some instances, has proved very beneficial. A more copious treatment with manure, without breaking the sod, might even answer.

If the branches are thick, and present a mass of "brush," they should be evenly thinned out towards their ends, or on the outside, leaving the best and most thrifty to grow, thus letting in among them the light from without. Be especially careful to avoid the common and fatal error of trimming the centre of the tree near the top of the trunk, or among the large branches, while the exterior remains as thick as ever—and never, for any consideration, cut off a large limb, unless the most urgent necessity demands it. Thin in—shorten in—from the outside—never from the inside towards the outer. Usually, however, very little pruning of any kind will be needed—it is better to trust to the effect of enriching and cultivating the ground.

Continue the manuring each year until the annual shoots shall have attained at least a foot in length, when it may be slackened or discontinued for a time. When this improved growth takes place, the better quality of the fruit, as well as its greater size, will give much satisfaction. The manure may be applied now in early winter.

THE BONAPARTEA.

During a recent visit to the nurseries of Ellwanger & Barry, at Rochester, we had an opportunity of seeing a fine plant of the *Bonapartea juncea* in full bloom. Like the century plant, it blooms but once after the lapse of years. The flower stalk rises from a mass of leaves near the ground, and bears flowers along its column. In this plant, it was 13 feet high, one and a half inches in diameter, and during the time of its most rapid growth, made six to eight inches in a day. The leaves are as large as one's finger, a foot long, and are over two thousand in number, all proceeding from a green ball eight inches high and a foot in diameter. It is a rare plant, and altogether is a great curiosity.

Mice and Fruit Trees.

If mice are as plenty in other parts of the country as they are in this section, we may expect to hear another spring, of much damage done to fruit trees. There are many means of prevention. Treading the snow about the trees is as good as any, *if it is only attended to.* It may have to be repeated two or three times in the course of the winter. This is but a reminder to those that neglected to protect their trees before winter came on.

ST. LAWRENCE.

Fruit-Growers' Society of Western New-York.

(Discussion continued from page 59.)

Culture of the Strawberry.

J. KNOX, of Pittsburgh, (who has 50 acres of strawberries in the highest state of cultivation,) gave, at request, the following statement, in substance, of his method of cultivating the strawberry.

His soil is a light clay, with limestone. He thought such a soil preferable to a light one. He first underdrained thoroughly, and then stirred the soil twenty inches to two feet in depth. Such treatment is best for almost any kind of fruits or fruit trees, as peaches, grapes, and all else. He employs two horses with a common plow and a subsoiler drawn by a yoke of oxen; and continues to plow in different directions till the whole is thoroughly rendered mellow down about two feet. Strawberries, he has found, do not need much manuring; good wheat or corn land answers well. He plants in rows two and a half feet apart, and ten inches asunder in the row. He has used a cultivator between the rows, and after this a subsoil plow; but latterly he has discarded all horse-cultivation, believing that the less the roots, which cover the whole ground with a network of fibres, are disturbed the better. He merely has the weeds cut with a hoe, and carefully takes all the runners off by hand. No plantation for fruit should be allowed to produce any runners, nor to bear any fruit the first year—this course only applies to that portion which is set apart for a crop—another portion is allowed to increase by runners for the purpose of making new plantations. The plants are set out early in the spring. By keeping the runners closely cut, the plants bear an abundance of fruit only; the two objects, fruit, and new plants, should be kept perfectly distinct.

The plants are protected in winter by a covering of straw threshed with the flail that it may be easily handled and spread. Rye is preferred for this purpose. Two loads per acre is the usual quantity. In answer to an inquiry if the straw did not introduce the seeds of weeds, he said he had never found any difficulty of this sort. He thinks that protection preserves the vigor of the plant, and that it bears better. In spring he removes the straw away from over the plants and places it between the rows.

He stated that he could not speak with confidence as to the best varieties of the strawberry, because some succeeded best in one place, and others in another place. Hovey's seedling, for instance, did well at Boston and Cleveland, but with every kind of management at Pittsburgh it had failed. Buist's Prize was formerly very successful, but it has now run out, and is hardly worth cultivating. He has found certain pistillate sorts to do best with some peculiar impregnators—and is experimenting on this subject. Hence he cannot, with these considerations, speak with confidence on the subject of varieties. Of the early sorts he prefers Baltimore Scarlet, Jenny Lind and Burr's New Pine—and after naming several for a general crop, said that the Triomphe de Gand was "the strawberry of all strawberries,"—and left little more to be desired—being a healthy, strong grower, and producing a heavy crop—not so much as the Wilson, but the fruit was worth more per acre—is satisfied it may be made to yield three hundred bushels per acre, and that this amount may be raised, picked and marketed for two hundred dollars, or sixty-six cents per bushel, all told—being so large it is easily picked. The Triomphe de Gand has, however, one disadvantage—it attracts so much attention in market that you can sell no other sort while it remains on hand. He has sent them to Buffalo, Cleveland, Chicago, Philadelphia and New-York; they carried safely, and he has had telegraphic despatches for more than his whole crop. He could have sold more than his entire crop in New-York city alone. If he could have but one variety, it should be the Triomphe de Gand. He thinks highly of the Wilson.

The great depth to which he cultivates before setting the plants will, he thinks, be sufficient to give 10 or 12 crops without replanting; but for the ordinary depth of 8 or 10 inches, two or three crops are enough. Cutting off all the runners, he stated, tended to prevent exhaustion, and made strong stools that bore abundance of fruit. The only fertilizer he uses is well rotted stable manure. A member inquiring if he could succeed with this management applied to Hovey's seedling, he said he had never succeeded with Hovey with any kind of treatment, but Burr's New Pine and others had done well.

[We were informed by some of the members that they had tried this mode of cutting off the runners, and had not succeeded to satisfaction—had lost money by it. It no doubt needs the best of management, and perhaps the deep mellowing of the subsoil here described.]

This kind of management he regards as the most profitable, although requiring much hand labor; the question is not, "With how small an outlay can you raise an acre of strawberries?" but, "Which pays the best?" If this does, and if it yields a hundred per cent. on the money invested, then, *the more money invested the better*. After the conclusion of his remarks,

James Vick called the attention of the members present who were farmers, to the fact that here, "the greatest strawberry cultivator in the world," had found the most thorough culture to afford the highest profit, a principle which he thought would apply to all other crops, and that the *best way* would be the best for farmers as well as for other people.

Time for Pruning.

Wm. B. Smith of Syracuse, thought a tree should be pruned about the first of June; no sap runs then. If done so early that the cut may dry over before the warm weather comes on, the cold may injure. Pruning does not hurt the growth early in summer if lightly performed. He prunes nursery trees at this time, but takes care not to cut severely. L. B. Langworthy said that time was a matter of little importance, but he preferred on the whole to prune after the leaves have come out in late spring; they heal better and do not crack. —— Huntingdon of Rochester, had formerly pruned apple orchards extensively for the purpose of grafting, from early spring till the leaves expanded; when pruned early the sap ran out and formed a black streak down the trunk—those pruned later formed a bright ring of new wood around the cut. He had never cut before the first of April, but had seen the sap ooze from wounds made earlier. G. Ellwanger said that very little growth was obtained from trees pruned so late as the first of June. Prefers pruning in February for producing healthy shoots. If done in early summer, he would do nothing more than to cut out positively bad limbs; pinching in may, however, be performed then to advantage. The pruning of an apple orchard should be done while the trees are young, and if this is performed, very little is required afterwards. —— Sharp of Lockport, who had several thousand trees in his orchard, had found late pruning to be bad, or after the leaves were out. H. N. Langworthy of Rochester, had sometimes performed the operation as the leaves were coming out, and the buds left would not start, or required nearly all summer to get under way. Those which were cut at mid-winter did well. If the limbs of apple trees were cut much later, or in spring, the sap flows out and blackens the wood and bark. H. E. Hooker held the same opinion as to the time for pruning—if the work is done as the leaves are expanding, or out, the trees would not grow or start, and he had seen many ruined in this way. He thought where a very moderate pruning was given to large trees in June, they might not be injured, but May was not the proper season. These views accorded with those of most others who spoke on the subject.

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THE JEFFRIES APPLE.—On the grounds of Ellwanger & Barry, at Rochester, this variety, they inform us, ripens during the first half of September, and as an amateur fruit is the finest for its season. It is too small for market. It has a higher flavor than the Summer Rose.

Systematic Formation of Pyramids.*

[Translated from the Revue Horticole for the Co. Gent.]

For more than half a century the practice has existed of pruning fruit trees in the shape of pyramids, or rather cones. But most of them everywhere are so badly formed that they hardly deserve any name. Some are pruned very short every year, and resemble more a thick bush, excluding air and light; others are better directed, but the central stem is seldom in harmony with the lateral branches; this is almost always too short, and the branches too long. It is in order to make this form better understood that I am going to describe it succinctly, in making use of a geometrical figure.

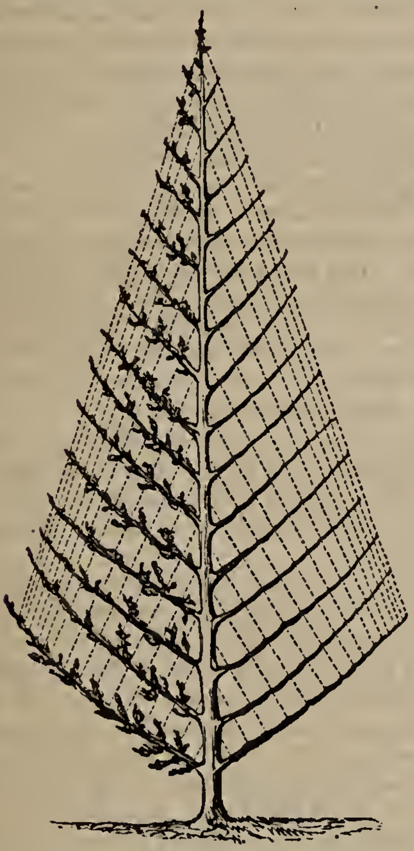


Diagram of Pruning a Pyramidal Fruit Tree.

The right hand side shows the branches only; the successive upright lines exhibit the pruning each year. The left hand branches show the fruit spurs.

The lines extending from the lower branch upwards, and which are united at the stem in the form of a cone, show the relative length to be given each year to the shoots of the lateral branches.

Most pear trees can be brought to this form; the apple with difficulty, but the apricot, cherry, peach and plum trees are made so to advantage.

EVENING PARTY APPLE.

Many of the readers of the Country Gentleman will remember the interest awakened by the report of the Penn. Hort. Society in 1853, bringing into notice a number of native Pennsylvania fruits. Among these, was the "Evening Party apple."

Through the kindness of Mr. Waring of the Penn. Farm School, we were favored with scions. In 1860 it fruited with us in Wisconsin, and again in 1861. It is now in season, and is really an excellent fruit. Thus far our specimens have exceeded the size as grown in Pennsylvania, being rather above medium; skin, whitish yellow, striped and splashed with red; flesh, tender, crisp, juicy, with a very agreeable flavor. Tree fair grower, ripens up well, and seems entirely hardy. We thing it will prove adapted to the Northwest.

Columbus, Ohio, Jan., 1862. A. G. HANFORD.

[For the Country Gentleman and Cultivator.]

Protection in Winter---Blight in Trees.

The propriety of protecting plants from repeated severe frosts has always been recognised by gardeners, but it is only recently that the minds of fruit-growers have begun to yield to the conviction that all their plants will well repay any additional outlay consequent in giving them judicious protection in winter. It may safely be asserted that plants are not benefitted by being frozen; true, there are numerous plants so constituted that they can withstand our ordinary winters without being injured, but it does not follow that frost is a necessary element to their existence. It is well known that gardeners who wish to attain the best results from their forced fruits—such as strawberries, grapes, &c.—that are to be ripened artificially in May and June, are particularly careful that the plants are not previously subjected to severe frosts, so that none of the delicate roots may be destroyed, experience having proved that the exemption from frost is of great importance to the crop. In cold graperies, failures have frequently been traced to exposure to frosts, and it is found that those most uniformly successful are seldom allowed to fall more than ten or fifteen degrees below the freezing point, and the plants laid horizontally and well covered with leaves from the forest.

Various opinions have been pronounced relative to the manner in which frost acts injuriously on plants; the most generally received, is the disruption of the tissue and sap vessels, consequent upon the expansion of the sap during its conversion to ice. This theory, however, does not seem to explain fully all the phenomena attending the destruction of plants by frost

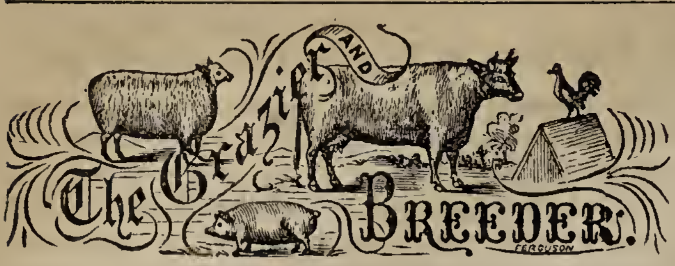
My observation has convinced me that many of the maladies of fruit trees, such as are commonly termed blights, are superinduced by the action of frost under peculiar circumstances in early spring.

It is well known that there is a constant circulation of sap in trees even in winter, except when the wood is frozen. We need only observe the result of cutting a branch from a tree in mid-winter to illustrate this; such a severed limb, if exposed, will rapidly dry up, being deprived of its supply of moisture from the roots. Now if we look at our fruit trees in spring, we will occasionally find them in a condition somewhat similar to that of the severed branch. The soil is frozen 18 or 20 inches deep, and all the roots that are embedded in that soil are of course also in a frozen state. While in this condition, the weather may be cold, harsh, and a blustering, *dry*, frosty wind, rapidly extracting moisture from every damp surface with which it comes in contact, the trees are subjected to an exhausting process which they cannot supply, the roots are in a mass of ice and cannot transmit moisture to the branches to overcome or meet the demands by evaporation, the sap vessels are dried up and contracted, vitality is destroyed, and a *blight* spot is observed in early summer, more or less extensive according to the severity of the injury—endeavor to cut this blighted portion, and it will be found hard, and the wood brown and completely dead.

This I have long thought to be the real cause of, at least, many of our blights, and have proved that covering the roots of pear trees and grape-vines during winter is of more importance to the plant than mulching in summer, and we all know how important summer mulching is, and how conducive to the health and continued vigor of plants.

W. S. G.

Apple Tree Borers.—C. Wheeler, of Stratford, Ct., says the *Boston Cultivator*, destroys or repels the apple borer, by putting small cotton pellets saturated with turpentine in the holes made by the insects, and then stopping them with putty. The vapor of the turpentine, it is supposed, kills the borer, and "Mr. W. has saved trees by this method which were perforated in fifteen to twenty places within two inches of the ground, and which were supposed to be past recovery."



[For the Country Gentleman and Cultivator.]

ABOUT FEEDING STOCK.

I want to group together a few ideas about feeding stock, and it is difficult to select a title that exactly fits all I have to say.

One thought is this: If you draw away from a cow, or a stable full of cows, a quantity of milk at the temperature of 98 degrees, you reduce the animal heat of that cow, or cows, by the amount of heat in your milk, and you must restore it to them. You have your choice to restore it in kind, i. e., with heated food, or to allow the natural process of respiration to restore it for you.

If you choose the latter alternative, you must do it at the expense, not only of hay and grain—*carbon* in some edible, and therefore expensive form, but also of the physical energies of the animal, which are taxed for this purpose in addition to the production of the milk from the elements of milk in the food. You demand of her not only the milk, 10, 20 or 30 pounds per day, but your milk must be of the temperature of 98 degrees, and you do not reflect that by just so much vital energy as is required for heating the milk to that temperature, by just so much is the animal's ability diminished to produce the milk itself.

Suppose, for example, that a cow weighing 900 pounds gives 30 pounds of milk per day, then 30-900ths, or one-thirtieth of all her animal heat is daily drawn away from her in her milk, and one-thirtieth of all her food and vital energy—mastication, digestion and respiration—that go to the production of animal heat, are spent to no other purpose than to furnish you with milk that is blood warm. This is equivalent to one day in every month, or twelve days in every year, devoted to this purpose, which if you adopt the alternative of feeding the cow warm slops or steamed food, is, it seems to me, saved.

But if this argument is correct and forcible, how much more forcible an argument founded on the entire necessities of the animal for a supply of artificial heat.

Suppose you take two specimens of the genus homo as an illustration, an Esquimaux from Labrador, and a Hindoo from the Ganges. Your Esquimaux will drink off a pint of lamp oil at a draught. Your Asiatic, from his burning plains, is contented with a morsel of rice for his daily food. Why is this? Because the child of the ice needs the carbon to feed the combustion that in his lungs or blood preserves that wonderful machine, his body, at the constant warmth of 90 degrees, though the air around him is measured by a temperature 60 or 70 degrees below zero.

The Asiatic, allowing that he could digest the oil, if he indulged in such draughts, would soon become himself a mass of oil. So with your stock. Leave them out-doors, exposed to the storms of a New-York winter, and they will not thrive, for they cannot eat much more than enough to keep up the animal heat; they have little ability for the production either of fat or milk. Stable them, and feed them properly, and they have a surplus of vital power for both. Why not advance one step farther, and feed them warm food to increase still more this power? So on the score of economy, I also find reasons for feeding warm food. Hay averages at this place $12 per ton. Wood is worth $5 per cord of two tons. Your artificial costs, therefore, less than one-fourth as much as your natural heat.

I am satisfied that it is easy to make a stable too warm and close for cows. I never enter an underground stable with its air-tight walls and solid floor, without feeling that such a place cannot be fit for the habitation of a herd of cattle. You or I, Messrs. Editors, can stand it to go into a crowded room and spend an hour or two of an evening, but we could not enjoy good health, compelled to live in that room, with the conditions reversed, an hour or so out of the crowd, instead of an hour or so in. Feeding warm food enables you to afford the stock all the heat they need, without too close stables.

I was conversing with an old farmer the other day about this subject, explaining my system of feeding warm slops thrown upon cut feed, and the greediness with which my cows devoured a bushel of cut hay, clover, and cornstalks. He said he had been in the habit years ago, of selling his grain to a distiller, and he had watched the process of feeding stock there. He said he had often sold the distiller straw for the cattle. It was spread out in the troughs or mangers into which the hot slops were poured, and, said he, I have often seen the cattle fish out rye straw six feet long and eat it all up clean, so palatable had it become from soaking in the hot slops.

I was surprised to see the remarks of our Nestor of New-York agriculture, in your paper a few weeks ago, in relation to cutting stalks. But he has been so ably answered by two of his immediate neighbors, that I can add nothing to it. But this I will say, that I make the cleanness with which my cows eat up their cut feed, a guide in feeding grain. If a cow treats her cut feed too indifferently, she gets less grain; and my herd is fed for milk, and interest keeps the feed up to the highest point that will pay. I get all the milk I can.

If my appetite had become so poor that I could relish nothing but mince pie, I should conclude that something was wrong, and I should reduce the mince pie. I should come down to more homely fare, johnny cake and bacon for instance.

Last winter I fed a good deal of first rate hay and stalks, with a portion of cut oats in the bundle, mixed with the refuse of the long hay, mostly clover, also cut, and the whole mixed with cold, dry meal of oats or corn.

This winter I fed for six weeks nothing but cornstalks and long hay, and buckwheat bran or ships mixed with cob meal wet with warm water. The refuse of the stalks and hay was saved until we were ready to cut it. Since then each cow gets a bushel of this at 6 A. M., with the hot slops poured on and carefully mixed up with it at 8 o'clock, no hay till 11 o'clock, and they eat next to nothing of it; their grain feed not increased a particle, and yet we had no falling off in milk, but a gain on last winter, with the same number of cows, though not the same animals, altogether of not less than 25 per cent. The nourishment was all there, but they would not eat it. They wanted coaxing, just as you and I want sugar and syrup, and salt and pepper, to be coaxed to eat enough.

In short, so well pleased have I been with *feeding heat* to my stock, that I have ordered a steam boiler, and I shall steam a considerable portion of my feed hereafter, of which my Watertown friend, J. L. R., will take note, that straw will form the principal diluent. When completed and in order I shall not fail to report.

Utica, N. Y. JOHN G. WEBB.

P. S.—Let me add one recommend for Wheeler, Melick & Co.'s (Albany,) single horse power and feed cutter. It is but a small matter to cut the feed of fifty cows with it.

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[For the Country Gentleman and Cultivator.]

Live and Dead Weight of Hogs.

As many farmers make a practice of selling their fat hogs to drovers, at so much a pound live weight, I will state the result of a recent experiment:

A medium sized, well fatted hog was weighed alive—live weight, 365 lbs.—after bleeding, 358 lbs.—after dressing, 315 lbs.—showing a loss of 50 lbs., or a trifle over one-seventh. A poorly fatted hog would probably lose more. ST. LAWRENCE.

Improvement in our Breeds of Cattle.

Occasionally we meet with Farmers who are disposed to be very eulogistic of what they term the "Native Breed of Cattle." Under this denomination the whole mongrel stock of the country, not known to have received, within a recent period, an infusion of imported blood, has been generally included; indeed we have sometimes found high grades of improved blood, called "natives," with great persistance, when it became expedient for any temporary purpose so to rank them.

For the anticipated improvement of the "natives," considerable sums of money have been expended, both by individuals in importing the different breeds of English cattle, and by societies in encouraging their importation and adoption, through offers of liberal Premiums. The question now and then arises, whether these anticipations of "improvement" have in fact been realized—whether the money of our societies, our importers and our breeders has been well expended, or whether, on the other hand, "fashion" and "fancy" have not led to very unpractical extravagances? Our own conviction is, that many intelligent farmers have a lingering impression on their minds that it is the *latter question*, rather than the former, which should be answered in the affirmative.

The *figures*, however, when we can get at them, and the opinions of those best qualified to judge, seem fully to warrant a very different conclusion. A committee of the "Hampshire, Franklin and Hampden" (Mass.) Ag. Society, of which G. M. Atwater, Esq., was chairman, for example, give some interesting data in a report published in its Transactions for 1861, the perusal of which has now called our attention to the subject—data which go to prove a striking advance in the weight attained by the cattle of the Connecticut Valley during the last forty years. It appears that in 1820 Jedediah Taylor of Westfield, furnished 14 head "of the best known herd of fatted cattle," for the New-York market, the average dressed weight of which was 1,000 pounds. In 1837 the herd of his son, George Taylor, also favorably known, dressed 1,300 pounds each. In 1860 the dressed weight of Hezekiah Taylor's herd was 1,500 pounds—an increase of 50 per ct. upon that of Jedediah Taylor's stock 40 years before, and of over 15 per ct. upon that of George Taylor, 13 years before. Now, from another part of the same report, we learn that it was in 1820 that Durham stock was first introduced into Westfield by I. Yeamans; that further purchases of Durhams in the same region were made by S. Lathrop of West Springfield, in 1824, the Huntingtons of Hadley, in 1834, and P. Lathrop in 1837; since which the character of the stock for fattening purposes has evidently been on the constant advance.

If it is objected that this is only an isolated case, we have some facts of more general range to offer, received from an authority which, in this particular direction, few will be inclined to question. We had proposed to ourselves, last summer, a somewhat extended range of inquiry bearing upon the distribution of the improved breeds of cattle throughout the country, and the results accomplished by that distribution; circumstances prevented its investigation to such an extent as we at first designed, and at length the matter was indefinitely "laid on the table." But an interesting letter was received from Solon Robinson at that time, which the present train of thought has called to light; we need scarcely add that Mr. R. speaks of what he knows. He says:

"In answer to your questions I will say that the estimate put upon the average weight of the 234,077 head of bullocks received in New-York in 1860, was 7¼ cwt. In 1859 it was 6½ cwt., but that was thought rather too low. The increase of 1860 was owing to the increase of grade Durhams, and to the better crop of corn. Of the whole number received I get correct reports of where they are derived from of only 181,584. Of these Ohio gave 35,131; Kentucky, 12,814; Illinois, 62,567; Indiana, 12,936; New-York, 28,219. I think 90 per cent. of Ohio, 95 of Kentucky, 10 of Illinois, 15 of Indiana, 10 of New-York, are grade Durhams. Some from Ohio and Kentucky are full blood. A much larger proportion of New-York stock shows Devon blood.

"Ten years ago, when I first began to report the cattle market, there was not one in ten of the number now that showed improved blood. It is now rare to see a drove from Kentucky that is not all grade to full Durham, and it is getting to be the case with Ohio. Indiana and Illinois too are increasing the proportion very rapidly. The proportion of all other improved blood to Durham is not ten per cent. Only for the fact that a large portion of the Durhams come to market the summer after they are three years old, *I think the average weight of all the bullocks now received would be* 100 *pounds more than ten years ago.* Then 6 cwt. would have been a full average; now 7 cwt. is not any too large. The Durhams will average 8 cwt. all this year, and *one and one-half cwt. more than the native breed of the same ages.*

"The only marked improvement in sheep is in South-Down grade lambs, which sell probably at $1 a head more than others of equal age. Solon Robinson, *Aug.* 11, 1861."

It will be observed how high the proportion of Short-Horn or Durham blood is rated in the Kentucky and Ohio cattle—States in which this breed has been diffusing itself more and more generally ever since its first introduction, as long ago as 1817. Mr. R. says it is now "rare to see a Kentucky drove that is not *all grade to full Durham.*"

It is also to be remarked that in this State the Devon blood appears to have proved, as a general thing, better suited than the Short-Horn, to the wants and circumstances of our farmers and their farms.

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[For the Country Gentleman and Cultivator.]

Cures for Big Head and Poll Evil.

Here are two receipts which are of great value to the owners of horses or mules. I have tried both in many cases, with entire success.

Big Head.—Cure for big head, which is an enlargement of the bone on the face of a horse or mule in a direct line from the eye to the nostril:—Extract the first jaw tooth by punching it out. It sometimes comes on both sides of the face; then a tooth will have to be taken out on each side.

Cure of Fistula or Poll Evil in Horses.—Take one quart of cider vinegar, one quart of urine, and three tablespoonfuls of fine pulverized glass—mix and let stand in a warm place for three days, and then pour two tablespoonfuls in each ear of the horse every other day until all used. I have known it to cure old cases of two years running, by the time it was used. D. J. W.

Versailles, Ky.

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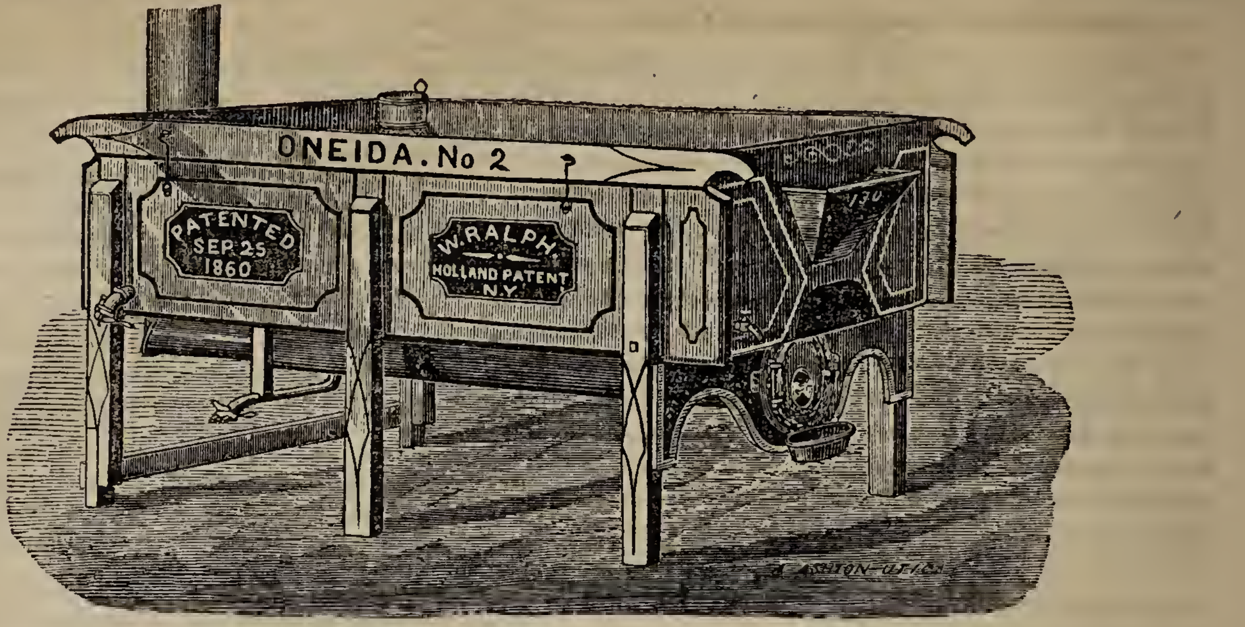
Gain in Feeding.

Eds. Co. Gent.—I herewith send you the gain of one yoke of oxen for 30 days—also one pair of stags, the same spoken of as having been fed on pumpkins the past fall. They were fed six quarts meal per day each—corn and buckwheat mixed and ground together. The oxen gained 100 pounds—one stag 80 pounds; the other upwards of 100; the largest gaining most, and he was also confined in the stable all the time; the other and the oxen ran in the yard all the pleasant weather. I think the gain was as much as could be expected in either case, but the stags have done better than I expected. The oxen were seven years old, the stags but three: probably that was one reason of their greater gain. Shall test them again in 30 days more; but suppose as they get fatter they will gain less; think their gain the past 30 days was much greater than it would have been had they not had their pumpkins for the two months previous. Their feed for this month is corn in the ear mixed with one-third oats, and ground fine. Jona. Talcott.



THE ONEIDA CHEESE VAT.

A correspondent at East Dorset, Vt., wishes to know what cheese vat is preferred by the Dairymen of this State. Above we give an engraving of one which is extensively used in Central New-York, and is believed to be equal to any other, if not the best in the State. If any one has a better, we shall be glad to hear from them. [See advertisement of the patentee, p. 86 of this no.]

[For the Cultivator and Country Gentleman.]

BUTTER FROM SEVEN COWS.

Messrs. Editors—I send you the following statement, thinking it might interest some of your readers and perhaps be edifying to agricultural societies that have awarded their first premiums to dairies, where the cows have averaged 160 pounds of butter, or thereabouts, for the season. If competitors for premiums on this article were required —in addition to making a *superior* article—to come up to a certain figure, say an average of 200 pounds to the cow, to obtain the *first* prize—the cows to be kept *well*—not on "bread and butter"—would it not tend to the better management and treatment of these useful animals? and would it not lead to a better class of cows being brought into the dairy? The barbarous treatment they receive in the winter, and the stunted, nearly calves, that are afterwards used as milkers, is one great reason, if not *the* great reason, why dairies are in many instances so unproductive. But I am "prone to wander," and will return to the matter in hand.

In giving statements of this kind, or in any other farm operations, I think the *details* should be given, so that one can the better judge whether the thing will pay. Cows may be kept *too well*, or not *well enough*, to afford a profit. You will therefore pardon me for entering somewhat into particulars.

This statement embraces the whole of the year 1861. The cows were all dried off about the 20th of January, except a two-year old farrow heifer, and came in from the middle to the last of March. This heifer furnished milk for the family through the winter, but made no butter, she having dropped her first calf the last of December, 1859, when a little over 20 months old.

In the spring we started with eight cows—seven new milch and the farrow heifer. Their ages were as follows: One 2, one 3, one 4, one 6, one 7, one 8, and one 9 years old. The 2-year old is three-fourths Ayrshire, the others are the common or native breed. The farrow heifer continued to furnish milk for family use until the 20th of September, when she was dried off, and on the 25th of October she had her second calf. When this cow came in, the 4-year old (having the disagreeable habit of holding up her milk occasionally) was dried off and fattened. So that from the 20th of September to the end of the year we had but seven cows giving milk, and the milk and cream for the use of a family of five persons was taken from their milk after that date. Now I think that the new milch cow gave enough more milk than either of the others from the first of November (at which time her milk was saved) to furnish what was used in the family up to the first of January, and during the time of her going dry previous to calving. It probably would not vary much from this, and I think would be as likely to vary one way as the other. I therefore estimate the butter made as being made from *all* the milk of seven cows for the year.

The manner of keeping the cows was this: Last winter they were fed good early cut hay night and morning —cut straw or chaff, with one quart of barley meal and shorts, wet with boiling water, and six quarts of carrots, at noon. In the middle of the forenoon and afternoon they had corn-fodder. About a week before calving the meal and shorts was increased to two quarts, and after calving to three quarts. This feed was continued until the 29th of May, when they had a full supply of green feed. From the 29th of May to the 5th of September they were kept on clover, grass, millet and green corn—their feed being cut and fed to them in the stable. On the 5th of September they were turned into the meadow and stubble ground, and had the run here until the 30th of October. During this time they were fed a little corn-fodder night and morning. On the 30th of October they were brought to the stable, and were fed early cut hay, corn-fodder, carrot tops, and six quarts of carrots each daily until the middle of November, when two quarts of shorts and corn, ground in the ear—equal parts of each by weight —was added to their feed. Their keeping this winter has been the same as that of last winter, with the exception of one additional quart of ground feed, and they being required to cut their own straw. But being very *sensible* cows they decline doing so to any amount, thinking it better to lie upon than to eat. I honor their judgment.

The cows were stabled nights the year round; and in cold weather were kept in the stable through the day, being turned out to water twice—forenoon and afternoon. They were regularly milked at 5 o'clock night and morning, by one milker, (your humble servant, who has done the milking for ten years or more, with but few exceptions,) and were *milked clean.*

I do not think this can be called *high* keeping, or keeping them on "bread and butter." My aim has been to give them *good* food, and a plenty of it. I freely admit that their keeping has been better than *straw.* And I would further say that "bread and butter" is intimately connected with this mode of keeping—the butter being taken from and not fed to the cows, and the bread will be forth coming when the manure made by them is applied to the land. But by this time you probably would like to know the result of all this without further comment.

Well, then, we have made from the cows, and during the time as above stated, 1,739 pounds and 1 ounce of butter—an average of 248 pounds and 7 ounces to the cow. Each churning was weighed after being worked over the second time, and made into rolls, and an account kept of it, and the butter was furnished to families in "the village" weekly.

I presume some have done better than this, for I do not suppose that I have beat all creation, and I most heartily rejoice in their success. Many, however, have not averaged over 150 pounds to the cow, and probably some have fell short of *that*. And most likely their cows have *run them in debt*. I think if such persons would sell out and enlist they would be the gainers. For they can make more money in fighting for their country, or in playing peep-a-boo with secesh as fighting is out of the question, than by making butter.

I would say in conclusion that the season has been a very good one for dairying, though cows that are soiled are not very materially affected by the season when properly provided for. And further, the above result was arrived at without any extra pains being taken to see how much butter could be made, but by the ordinary process of making butter through the season. The last week in December we made 24 pounds of butter.

Jefferson Co., N. Y. J. L. R.

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Freezing Cream for Butter.

A Wisconsin correspondent of the Rural New-Yorker, says that if milk is set in winter where it will freeze, and the cream be taken off and kept without thawing until enough is had for a churning, and it is then thawed gradually and churned, it will make good winter butter. It is the alternate freezing and thawing which makes cream and butter bitter. Those who cannot keep milk without freezing, may try this plan.

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PRODUCT OF FIVE COWS.

The profit of five cows I think worthy of a place in the Country Gentleman. As I called on my friend E. P. Wilber of Cummington, Mass., he gave me a paper containing the amount of butter which he sold from his five cows from the first of May up to the first of January. The number of pounds sold was 1,013, which at market brought 21 cents per pound, amounting to $212.73—deducting $10.13 for freight, leaves a clear income of $202.60—in favor of each cow, $42.54. His cows were of the native breed, with good care and common keeping.

Plainfield, Mass. A SUBSCRIBER.

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MILKING COWS ONCE A DAY.

Messrs. Editors—I saw in your No. for Jan. 9, from my own county of Litchfield, a statement saying that if well fed, cows would give as much as if milked twice. I confess it to be a new idea, and I thought that some of our young men of the present day, as well as some that were older, would subscribe to it at once, for it surely would be less work. With the experience of fifty years, with from 5 to 25 cows, I cannot endorse it. I have tried it, and with good feed I could get nearly two-thirds as much for a while, and then half as much. My course for drying a cow has invariably been to milk her once a day, and it worked admirably. If there is any secret about it, let us all be profited by it, and save the labor of our hands. Judson Wadsworth.

West Winsted, Conn.

[For the Country Gentleman and Cultivator.]

Produce of a Butter Dairy of Ten Cows.

Messrs. L. Tucker & Son—At my request Mr. Albert Yale of Guilford, Chenango Co., when renewing his subscription to the Co. Gent., handed me a statement of his dairy for the year 1861, which I enclose. His farm is one of the most noted dairy farms in this county, and also one of the smallest, yet equalling in profit, many of more than double its size. There are but 56 acres under improvement. A description of this farm, and a more extended notice of his manner of feeding to produce such results from each cow, will be found in Co. Gent. for 1860, vol. 17, No. 10. J. *Bainbridge, N. Y., Jan.* 28, 1862.

Statement of the proceeds of the Dairy of Albert Yale, *for* 1861.

The number of cows I have milked this season was 10, the same as last year. My memorandum shows that the first tub was filled March 16. My cows calved, mostly, in the month of March.

Total amount of butter made, lbs.,	2,785
Amount sold,	2,305
Leaving amount used in family and on hand,	480

Amount of sales of dairy 2,305 pounds, at 23 cents,	$530.15
Amount used and on hand, 480 pounds, at 23 cents,	110.40
Eight deacon skins at 50 cents, sold,	4.00
Three calves raised on skim milk	17.50
Value of pork raised, deducting cost and corn,	59.05
	$721.10

Making the average to each cow $72.11. Number of pounds to each cow, 278½.

You will notice above that there are 11 calves accounted for, and but 10 cows. One cow had *two calves*.

To farmers that are keeping a dairy, I would say in the first place, *cut your hay* EARLY, and get it in in good order. This is part of the great secret in bringing your cows through the winter in proper condition to be profitable the next summer. Then give them *enough* of this and no more. When I see a farmer forcing his cows to eat *straw* one half of the time, and the other half, daisies, weeds or dry woody stuff *called hay*, with a shower of full ripe seeds falling from it at each forkful, and no grain to offset, I mark that man as one who will never get rich from his dairy alone. The proper place for the straw is *under* the cow. Give her a good soft bed, and keep her clean. Never *compel* a cow to eat straw. When the fall rains begin, I put my cows in the stable through each storm. During the winter months they are most of the time in the stable and are let out twice a day for water.

Another point. If dairymen would take more pains in selecting their cows, and breed them to some thoroughbred bull, of the best milking families, and feed them better, it would not be necessary to keep but one half the number of the general average of cows to make the same amount of butter. During the fall and early winter I prefer to feed roots; but after they are well dried off, commence with one pint of meal to each cow, until within about one month of calving, and then increase to 1 or 2 quarts once a day; after calving, 2 quarts at a time, twice a day. Keep them on this feed until they have been to grass 8 or 10 days, when I decrease the feed gradually each day. Albert Yale.

In Mr. Yale's statement for 1860, he gives the proportion of each grain in the meal used by him, &c. J.

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Turnipy Taste in Milk.

I notice that your correspondent J. M. Harper, speaks of the taste *unavoidably* given to milk by feeding turnips. I find it perfectly easy to avoid it entirely, by feeding the turnips immediately after milking; they then impart no taste whatever to the milk. I have tried this plan for two years, and find it an invariable rule. J. Atkins.

Fonthill, C. W.

[For the Country Gentleman and Cultivator.]

FARMING IN MASSACHUSETTS.

Messrs. Editors—As this is the season for sleigh-riding and visiting, I will give you an account of a recent visit I made to the family and farm of Wilbur Wilson of Agawam.

After taking care of my stock, I harnessed team and crossed the ice bridge on Connecticut river, two miles south of Springfield, and a drive of one fourth of a mile brought me to the house of Mr. Wilson. In a short time after my arrival, Mr. W. invited me to visit his premises. After going the rounds, I asked a few questions, and I will give you his answers.

Mr. Wilson owns 220 acres, which are divided as follows: His home lot consists of 45 acres, which is under a high state of cultivation, and here he raises corn and roots principally. His corn crop the past season yielded when dry and shelled, 98 4-5 bushels per acre, weighing 60 lb. per bushel. His corn was planted in drills, 2½ stalks per foot, and when land is in a high state of cultivation he prefers drills to hills.

Of roots he raises a great variety, but prefers the sugar beet above all others for feeding purposes, and considers one acre better than any two acres of corn raised in Conn. Valley. He thinks that sugar beets are the best and cheapest feed for store hogs, and his hogs look as though they were not starved. In speaking of turnips, he says there is no need of having turnipy milk or butter if fed at the right time. His plan is to feed on a full stomach, so that all the turnip smell may pass off while the cow is digesting her food, and before it penetrates her flesh and milk.

Mr. Wilson owns 45 acres on the Agawam meadows, which is kept for hay, and without any top-dressing he cuts 100 tons of good hay. This he feeds to his stock, and considers it the very best of feed for stock of all kinds.

A short way from the home lot, he owns 60 acres of plain land, where he gets his wood, and cuts some hay; the balance he pastures. His pasture lot in Chester contains 100 acres, and is devoted to pasturing young stock in the summer, of which he has a good many; and in fall all are brought home to enrich the home lot.

Mr. Wilson's stock consists of 39 head neat stock, 5 horses, 3 colts, 6 Chester county breeding sows, and 2 boars. Of the number of neat stock, 18 are thorough bred Short Horns, 13 are two years old and coming in this spring; the balance are calves and yearlings. There are 4 young bulls in the above number which are well worthy of looking at, sired by Hamden, who is a superior animal for beauty and pedigree. Two of the above cows are celebrated for their milk and butter qualities, one giving 26 quarts beer measure per day; the other making 17 lbs. butter per week. The bull Hamden is thorough-bred, 4 years old, and for symmetry and action he has few equals in the Conn. Valley, and has always taken the highest prize where he has been exhibited. Mr. Wilson is worthy of praise for the pains he has taken in selecting his stock as regards their milking properties and their pedigree, and the buyer must be difficult to please who cannot make a choice out of his herd, as he makes it his business to raise and sell stock of all kinds, and none but the best.

Mr. Wilson's manner of feeding is as follows: Morning, hay and then water; noon, roots; evening, cut feed, afterwards hay, and water at 7 o'clock at night.

His barn is 36 by 100 feet, built with cellars underneath. Upper floor for hay and other crops. First cellar for stock, and underneath is a root cellar and tank for liquid manure. This he makes compost of, as follows: He prefers muck, but any other earth will answer. He saturates the heap with the liquid, and covers with plaster for a time, and then mixes all well. This is applied to his corn in hills, and also to his roots.

Mr. W. intends having more in small fruits, as his land is well adapted for such, and is only 2 miles from Springfield, the best market on Conn. Valley.

It is a pleasure to visit such farmers as Mr. Wilson, who are always ready and willing to give information when desired, not theoretically but practically, and Mr. W. is a practical farmer and one who is well qualified to instruc the young farmer on all agricultural subjects, both as r gards economy and practice, and in making the most fro a small capital, and such was Mr. W.'s beginning.

Mr. Wilson is a constant reader of the Country Gentleman, and he says he has derived much valuable information from its columns, and would advise all youn farmers to subscribe for it, so as to keep up with th times. I may visit other farms, and should this meet wit your approval and a place in Co. Gent., I will give yo the items of my visits. J. W. *West Springfield, Mass.*

HOW TO MAKE A GOOD HEDGE.

I intend to put a hedge fence around my nursery and fruit garden—where can I get the seed and how should the plants be managed till the fence is complete.

Randolph Co., Indiana. G. GEBHART.

The Osage Orange will probably prove best, although it generally fails at the west and everywhere else, for the same reason that the corn crop would prove a failure if the seed were scattered over an unplowed pasture, or in the middle of the highway. The best way would be to purchase the plants, as failure generally results from attempts to raise them from seed by those not familiar with their management. They may be had of Bateham & Hanford of Columbus, Ohio, and probably of E. Y. Teas of Richmond, Indiana. Set them out 8 inches apart, when one year old, on land with a dry subsoil, or near the line of a good underdrain; wait till the buds begin to swell, so as to see that all the plants are good, to avoid any gaps. Let them grow one year, with a good cultivated strip of mellow soil five feet wide on each side. Cut them down two inches high the second spring, and again three inches higher before midsummer. The third spring cut them down to within 5 inches of the last, and at midsummer again 6 or 8 inches higher. Two more cuttings should be made the fourth year, by which time, if the hedge has been well managed, it will be a good barrier. It must have been well cultivated on both sides at least five feet wide, or a strip of mellow soil ten feet wide in all, several times a summer, during all this time,—which is cheaply done by horse labor. Without this cultivation, or if the hedge has been set close to a fence, where it cannot be cultivated, it will certainly prove a complete and total failure, like the one represented in the fig. 1, instead of the one shown in the second figure, which has been well pruned and cultivated.

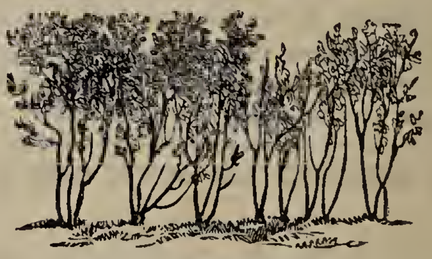

Fig. 1.—Hedges a Humbug.

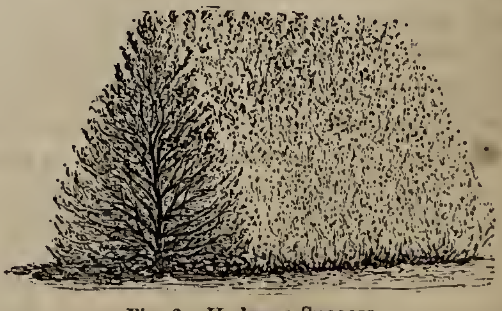

Fig. 2.—Hedges a Success.

THE CULTIVATOR.

ALBANY, N. Y., MARCH, 1862.

New-York State Ag. Society.—We give, on another page, a brief account of the proceedings at the annual meeting of this Society on the 12th and 13th ult. The new Executive Committee met and organized at the Society's rooms, Friday morning. The matter of locating the next Exhibition was then deferred until the meeting of the Committee in March, at the request of gentlemen from Rochester, who desired additional time in which to complete their preparations before presenting a formal application and guarantee on the part of that city. We need scarcely add, that the length of time which has now elapsed since our State Fair has been held in Western New-York, together with the unusual facilities of access and accommodation which Rochester affords to the farmers of all localities, render it certain of a brilliant success if located there—whatever the character of the times may be—which will not only extend very greatly the Society's sphere and means of usefulness, but which must also be gratifying to the public-spirited citizens of that place, and largely promotive of its general interests and prosperity. Upon the line of the Central railroad, and receiving also the rich tribute of the whole Genesee Valley, Rochester, from east, south and west, can draw such an attendance the coming year, as will be sure to remunerate her liberally for the expenses she will incur; while, if the season prove, as we trust it may, a season of peace regained, and agricultural prosperity fully restored, we might almost hope to witness an exhibition there, unparalleled, either in its character or in the number of its visitors, by any in the whole history of the Society.

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Annual Meeting of the Albany County Agricultural Society.—The annual meeting of the Albany Co. Agricultural Society was held at the Mayor's Court Room, in the City Hall, on Wednesday, the 8th day of January, 1862. The President called the meeting to order, and announced that it had been convened according to the provisions of the constitution. In the absence of John Wilson, the Secretary, R. H. Bingham was appointed Secretary pro tem. After the usual report of the Treasurer, and other officers, had been received by the President, it was resolved that the election of permanent officers for the ensuing year be postponed until the 12th day of February, at the City Hall, Albany, and in pursuance of this adjournment, the members of the Society met, and on motion of J. C. Cuyler, Esq., the Chair appointed a committee of six to nominate permanent officers for the ensuing year, who reported the following ticket, which was unanimously elected:—

President—William Tuttle, Coeymans.
Vice-President—Peter B. Noxon, Ireland's Corner
Treasurer—Robert Harper, Albany.
Secretary—R. H. Bingham, Albany.
Directors for Three Years—Jas. W. Jolly, Coeymans, and Joseph Hilton, New Scotland.
Directors for Two Years.—Chas. Bentley, Westerlo, in place of William Tuttle, elected President; John Waggoner, Guilderland, holding over for two years; John H. Booth, Bethlehem, and H. L. Godfrey, Albany, holding over for one year.

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Premium on Nursery Trees.—George Gebhart of Union City, Indiana, suggests the expediency of offering premiums for well grown nursery trees, at horticultural exhibitions. He states that he has visited some thirty different nurseries, and it is his opinion that by far the greater number of the three and four year old trees are spoiled by bad pruning. The suggestion is a good one, and in such a locality, where bad pruning is so common, the exhibition of well raised trees might tend to a material improvement. A few trees only of each sort, could be thus exhibited; but an acre of well grown trees, or an entire nursery, (to be examined only by a *competent* committee,) would be the best test of the skill of the nurseryman.

◆

Good Crop of Corn.—In the Notes on Cayuga County Farming, in our last volume, a fine crop of corn was mentioned, growing on the farm of Wm. D. Osborn of Port Byron, and which was estimated then as promising 70 bushels per acre. A note just received from the owner, says, "The field of corn, which you noticed when at my place, gave me 920 bushels of sound corn, and about 50 of poor. The field contained six acres." This is at the rate of 161⅔ bushels of ears per acre, or probably not far from 90 bushels of shelled corn.

◆

French White Zinc Paint.—We have made a trial of the White Zinc Paint, manufactured by the Vieille Montagne Co., advertised in this paper, and sent us by J. M. Strong, the agent in New-York city. We placed it in the hands of a skillful house-painter, and he states that it is far superior to common zinc paint, possessing more purity and body—and is consequently worth considerably more per pound. The smooth white surface which it forms is very satisfactory. Judging from this specimen, it is an excellent paint.

◆

The Rebecca Grape.—Hovey's Magazine says, "We know nothing among grapes, either native or foreign, superior to a well ripened Rebecca." The drawbacks are, moderate growth, small foliage with some liability to mildew, and the necessity for some protection in cold localities. The same authority states that it is as early as the Diana, is of the nature of the Delaware, and requires the same generous culture.

◆

☞ A friend calls our attention to the fact that Punch's new Almanac for 1862, "advises the farmers to sow their Ps, keep their Us warm, hive their Bs, shoot their Js, feed their Ns, look after their potatoes' Is, and then take their Es." The old Latin author wrote

"Fas est ab hoste doceri,"

and the above advice is mostly wise, as well as witty. We may add, however, this farther remark: It is also Ys to do all things in C-son; feed 'A liberally in cold weather; do not Ts your milch cows with shouts and bl-Os, remembering that cruelty has no X-Qs (excuse); finally, Cs every opportunity for the acquirement of information.

◆

Large Hogs.—Owen Buel of Easton, Washington Co., recently slaughtered six hogs and six pigs, whose weights were as follows:

Old Hogs.	Pigs.
405	416
500	448
534	452
483	419
501	372
421	380
2,844 old hogs.	2,487

2,487 pigs.

5,331 total weight—average weight, 444¼ lbs.

The above is the best lot of pork that has been killed around here in a good while. Can you beat them?

CALEB GRIFFEN.

◆

Potatoes, &c.—Prince Albert, White Mercers, and Peach Blows, are the favorite varieties of potatoes raised here. Spring wheat has averaged about 10 bushels per acre for the year 1861. Peaches do not appear to be profitable here, for the trees die in a few years. Some of our tanners say that red oak bark is the best for tanning purposes, and others that rock oak bark is still better. J. T. H. *North Chester, N. J.*

◆

Farmer's Club.—A subscriber at Sturbridge, Mass., writes us that they have recently established a Farmer's Club in that town, and that its discussions, which are well attended, have proved interesting and valuable.

☞ The Massachusetts Society for Promoting Agriculture has offered premiums for several years, upon various Experiments with Manures. The Secretary of the Society R. S. Fay, Esq., presents some interesting statements of the trials made during the season of 1859, in a just published *Part* of its Transactions. The conditions of these trials were: five lots of land to be selected, equal in quantity and quality; each of the five lots to receive a deep plowing, a shallow plowing, and a harrowing; four of the lots to be manured in equal quantity, as follows:—the manure on No. 1 to be *plowed in deep*, on No. 2 *shallow*, on No. 3 buried *slightly*, and on No. 4, left upon the *surface*—No. 5 receiving no manure at all. The following is a summary of the results that were reached—the total number of experiments being thirteen:

No. 1—Deeply Manured.

Best crop in	2	experiments.	
2d	do.	1	do.
3d	do.	3	do.
4th	do.	6	do.

No. 2—Shallow Manured.

Best crop in	4	experiments.	
2d	do.	7	do.
3d	do.	1	do.
4th	do.	1	do.

No. 3—Harrowed in.

Best crop in	6	experiments.	
2d	do.	4	do.
3d	do.	2	do.
4th	do.	1	do.

No. 4.—Surface Manured.

Best crop in	1	experiment.	
2d	do.	2	do.
3d	do.	7	do.
4th	do.	4	do.

No. 5—Without Manure—product smallest in 12 out of the 13 cases, in one instance the crop having rusted on lot No. 1.

Mr. Fay remarks:

"So far as these experiments have gone, they go to show that, for an immediate crop, at least, plowing the manure under very deep does not produce corresponding return, the best result being very nearly equally divided between that which was plowed in shallow and that which was only harrowed in. Where the manure was left exposed on the surface a better result was obtained than where it was deeply covered. We have yet to learn the effect of manuring deeply or lightly with a view to succeeding crops, a fact of infinite importance to the farmer. The late Mr. B. V. French once tried the experiment by plowing in the manure of half a field 'as deep as he could get it,' and then treating the entire field alike, manuring the whole of it equally, and plowing it in very slightly. He kept an account of the product for several years, and the yield on each part was alike—to use his own language, 'I never saw anything of the manure which was buried deeply; it was, in my opinion, *thoroughly buried.*'

"In these experiments, in order to have a completely satisfactory result, sufficient manure, say not less than ten or twelve cords of barn-yard manure, or its equivalent, should be used to the acre; enough, at all events, to have the effects of it felt during the period of the trial. One great mistake in our farming is, to attempt manuring too large a surface. An acre of land highly manured will produce vastly more for five years, without any further addition, than a fifth of the quantity annually applied for the same period."

◆

☞ We see by the papers that a "Sorghum Convention" was held at Columbus, Ohio, Jan. 7, at which "farmers from every part of the State were present, and the Convention having been turned into an experience meeting, much valuable information was drawn out." Samples of Sorghum Sugar to the number of 15, said to be of "very fine color and handsomely crystallized," were exhibited, together with large quantities of syrup. Cook's Evaporator was very highly spoken of for sugar making. The correspondent of the Tribune, from which these particulars are derived, states that "about 3,000,000 gallons of syrup were made in this State (Ohio) last fall, which has been sold at an average of 60 cents per gallon, or about $1,800,000!"

◆

Cotton Culture in Illinois.—Extract of a recent letter to the Editors of the Country Gentleman, from Hon. W. H. Osborn, President of the Illinois Central Railroad Company:—"Cotton was produced here from the earliest settlement of the State, until fifteen or twenty years since, when the economy in the use of machinery in its manufacture brought the price so low that hand-looms fell into disuse. No one appears to have abandoned it because there was anything in the soil or in the climate, which prevented its culture; and the great necessity which now exists for the extension of our cotton fields will evidently lead to its extensive cultivation in this State."

◆

Are our Soils Exhausted?—Under the above in your issue of the 23d inst., you make a quotation from an English paper, and append to it some remarks of your own which are very worthy of consideration. My object just now is to bear testimony to a fact which does not seem to be properly understood or appreciated, outside of our own State at least.

For the last three years my business has led me into every county in the State, and has required that the productive industry of every section should be thoroughly investigated, as by that the true value of the lands could be best arrived at. I aver then, without the fear of contradiction in truth by any person, that so far from our soils being exhausted, *they are growing more productive every year.* There are individual instances where the soil may deteriorate, but by far the largest number of farmers in every county in the State, so manage their farms that they are growing more fertile from year to year. In some sections more attention is paid to the making and application of manure than in others; but as a general rule, the land is everywhere improving, and has never been in so productive a condition as at this very time. I know whereof I do affirm. P.

Darien, Genesee Co., N. Y.

[We are glad to have our own opinion supported by that of an authority so well qualified to judge with regard to this mooted question. Our correspondent has had extensive opportunities of observation throughout the State, as a member of the State Commission for the Equalization of Tax Assessments; and we desire to call the attention of the Mark Lane Express particularly, to the unhesitating manner in which his statements are asserted. Eds. Co. Gent.]

◆

☞ The remarkable Fat Ox which we noticed in visiting Franklin Co., Mass., a year ago, we see by the Greenfield Courier, has just been sold. The owner was Hon. John Sanderson of Bernardston, and the purchaser Mr. Bryan Lawrence of the New-York City Central Market. The price paid is said to have been $500. The following is given as the accurate admeasurement of the animal, "as made a few days ago by a gentleman entirely disinterested: Girth behind the fore legs, 10 feet 4¾ inches; round the belly, 11 feet 5¾ inches; distance through the belly, 4 feet 6 inches; length from root of horns to square end of buttock, 9 feet 5 inches; distance between outside of fore feet, 3 feet. His weight is not accurately known, but it is undoubtedly from 3,700 to 4,000 lbs." We should much like to know whether this size has ever been exceeded, in this country at least?

◆

Corn for Fuel.—The Henry County (Ill.) Chronicle of Dec. 17, says that there is no doubt but much Indian corn has been used for fuel in some parts of that State. "Farmers say they have counted the cost of shelling and marketing their corn and the price obtained; also the value of a bushel of corn for fuel compared with one of coal; and have arrived at the conclusion that there is no profit in exchanging corn for coal, all things considered. They contend that a bushel of corn is worth as much as one of coal for fuel; and, if this be true, it does seem that to sell corn to buy coal is labor without profit. So far as *present* prices, argued solely from the stand-point of profit and loss, are concerned, farmers are burning their corn by a correct business rule."

Inquiries and Answers.

USE OF LIME.—Some of our farmers have been spreading lime on their corn ground during the past fall, and I would like to know the experience of your readers as to which, in their opinion, is the best time to spread lime—in the fall or spring? Some of my neighbors contend the strength of the lime ascends in the air; others, that it goes down, and if you plow it under you will not get the benefit of it all again. What is your theory in regard to these opinions? J. T. H. *North Chester, N. J.* [As the effects of lime last several years, it makes very little difference at what season it is applied, provided it is well pulverized, so that it may be evenly spread, and not in lumps, which can be of very little use. It cannot evaporate—it may sink into the soil, if copious and long continued rains occur before it becomes converted to a carbonate, which must be in a few days at furthest. After that, the carbonic acid brought down in rain, may dissolve it very slowly and in almost infinitesimal portions. The fact that the effect of a dressing of lime is sometimes known to last 20 years, shows that it is not easily carried off. If sown on grass, nothing further is necessary; if on plowed land, harrowing may serve to mix it with the soil.]

ASHES, AND ANIMAL MATTER, AS MANURE.—What is the comparative value of leached (soap-boiler's) with unleached ashes? And what are they worth per bushel,—where stable manure can be had at, say, 10 cents per horse cart load? Also, is the offal (mostly livers, lights, and hearts of hogs,) at slaughter-houses, considered valuable as a manure? If so, what is the best way to manage and apply it? R. [As we have often published answers to the first question, it may be only necessary for us to say briefly here, that both leached and unleached ashes are usually but not invariably useful as manure. The condition of the soil has much to do with their success; and experiment is the only sure test. Leached ashes are of course several times weaker; but different manufactories leave greater or less potash remaining. Usually, one to five loads of leached ashes per acre are a material help to the land, sometimes strikingly so—and if to be had at a reasonable rate, we should certainly recommend a fair and accurate trial to be made. And if good manure could be had at 10 cents per horse-cart load, we would advise to keep one horse at least employed in drawing through a large part of the year. The comparative value of ashes and such manure will vary in different places, and must be ascertained by careful experiment. The refuse matter spoken of forms exceedingly rich manure, and may be made into good compost by mixing in alternate layers with turf or muck, and allowing it to stand half a year or more.]

DISSOLVING BONES.—Will you, or some of your correspondents, give, through THE CULTIVATOR, directions for dissolving bones with oil of vitriol? W. F. SEGAR. *Alton, R. I.* [Sulphuric acid will not dissolve bones well, unless they are previously ground to powder. If the bones are whole, or cracked into fragments, it will require months for the acid to dissolve every part, and even then the operation will be imperfectly performed. After the bones are ground there are two modes. One is to place the bone dust in a heap on a wood floor, wet it by means of say half its weight of water, and then add gradually, as it is stirred over, nearly as much sulphuric acid, stirring frequently for several days. The other mode is to place the dust in a cask or tub, wet it by adding a rather larger portion of water, or nearly its own weight, as the cask will hold it, stir well, and then add, by weight, nearly half the weight of the bones in sulphuric acid. Stir rapidly, and when thoroughly mixed pour out the mixture on the floor, and prepare another portion, adding it in turn to the heap. Let it remain some days, till all parts are intimately combined. Being of the nature of a paste, it must be rendered dry enough for spreading by mixing with it some dry powder, as dried peat, pulverized charcoal, coal ashes, &c., but no alcaline substance as wood ashes, lime, &c. The sulphuric acid costs some two cents per pound in large quantities, and it is doubtful whether the benefit derived from this manure would pay its cost for most crops.]

MOLE PLOWS.—What is the best mole plow, and where is it to be had? W. S. P. *Erie Co., N. Y.* [There are a number of good mole plows, manufactured principally at the west. We have seen one of these operate satisfactorily, both in making a simple mole through the subsoil, (two and a half feet deep,) and in drawing in a set of tubular tile strung on a rope. It was then sold by J. Dunham of Etna, Tompkins Co., and perhaps might be had of C. Bartholomew & Son of that place, who are extensive implement manufacturers. It may be well to remark that there are very few of the subsoils of the country adapted to successful mole draining, even where free enough from stone to run freely. The texture must be such as to form a smooth face as the plug passes, and one which will not crumble down in the lapse of years. This can be determined only by trial.]

BREEDING SOWS.—I would like to know how soon after a sow has littered will she take the male—have heard they would in two or three days. Is it so, and if so, is it advisable to do it? B. [Sows should not be allowed to have more than two litters a year,—the period of gestation lasting nearly four months, and leaving about two months, more or less, between each period. Although they may often take the boar sooner, yet it is unadvisable.]

OYSTER SHELLS FOR MANURE.—I wish to inquire of you or some of the readers of your publication, what is the best method of applying Oyster Shells as a manure? J. S. G. [Burn them to lime, and apply as other lime—say 25 bushels per acre. They are sometimes crushed or ground in a bone or bark mill, and spread, without burning. There is a very small amount of animal matter, say one two-hundreths part, and the dissipation of this by burning would but slightly lessen the value. They would be most quick and active by burning to lime, and more enduring perhaps if crushed and spread, requiring and admitting a more copious application in the latter instance.]

MUCK.—Will you please tell me through your paper, if muck from the common sand land, is of much value—if so, how to compost (or mix) with stable manure? W. J. S. [Our correspondent is hardly distinct enough in his inquiry. Muck is vegetable matter, mostly found in low wet places or swamps, to which it has either been washed through the lapse of ages, or has gradually accumulated by the growth and decay of water plants. The only difference between such muck as found in sandy or in clayey regions, is in the greater or less amount of silex or alumine respectively, composing the earthy matter. The most clayey would make the best absorbent of manure, but either would doubtless answer a good purpose. To prepare it for composting, throw or draw it out in heaps during the dryest part of the year, keep it as dry as practicable, and place it in alternate layers with common manure, one-half or two-thirds muck. The thinner the layers of each, the more perfect will be the compost. If taken out in winter, it will be heavier with water, and need longer drying. If possible, provide a shed or thatch to keep off rain, and let it dry half a year. It contains, when saturated, about nine-tenths water—and unless quite dry in cold weather, will freeze into lumps. It is far less efficient as an absorbent of manure, when not dry.]

PLANTING NEW GROUNDS.—I have a lot (2 acres) twice as long back as it is front, which I want to improve, and get ready to build upon, when able; the house to be in the centre 60 feet from the front. Please recommend some book or plan that will give me good advice as to how to work, and oblige R MC'C. *Xenia, Ill.* [We cannot do better than refer our correspondent to the plan figured and described on page 30 of the Illustrated Annual Register for 1861, and to those on pages 238 and 239 of the Register for 1860, or 2d volume of *Rural Affairs.* The article on Landscape Gardening, containing the two last named plans, affords many practical suggestions in relation to laying out, planting and managing grounds. On p. 270, volume first, of Rural Affairs, our correspondent will find directions for preparing the ground for and planting orchards and fruit gardens—with many hints in other parts of both these volumes.]

MANGEL WURTZEL.—In growing Mangel Wurtzel is there (or would there be) anything gained by growing the plants in a forcing bed and transplanting—if so, when should they be transplanted and when sown to be fit for transplanting? P. *Montour Co., Pa.* [For field crops, the seasons are long enough for the full maturity of the crop, if the land is rich, in good order, and is kept well cultivated. The mode above mentioned would be troublesome and expensive and would not pay.]

HOW TO TRAP FOXES.—A "Young Farmer" wants to know how to trap foxes. I will try to give him a "recipe" by which, if he possesses a moderate portion of ingenuity, he will be able to get rid of a number of them. Let him take a good steel trap, the less rust on it the better, and smoke it well with any mild smoke, (I hang mine in the chimney) for a day or two; then do not handle it with bare hands, but with mittens or gloves. Take it to some place where the foxes travel a good deal, and dig a small hole in the snow, put the trap in and cover it lightly with snow, and lay a piece of meat down on the snow directly over the pan of the trap, (hog's liver is the best,) as negligently as possible, and then obliterate all the tracks within a rod of the trap. The fox in passing will scent the bait, and go up near it. He will then walk around it a good many times, scenting the ground all around the bait; then he will, if he don't smell the rust of the trap, pounce upon the meat, putting both fore feet on it, and of course, if the thing is well arranged, he will be fastened. P. S.—Mind and set the trap in an open lot, and not as would be supposed, in the woods. Fox Hunter.

Tobacco.—Will you please tell me through The Cultivator, where I can buy tobacco seed, and a work giving directions for growing and preparing for market? J. R. [The seed can be procured at most of the seed stores. We know of no work specially devoted to tobacco culture, but you will find an excellent practical treatise on its culture in Onondaga County, in the vol. of The Cultivator for 1860, commencing on page 338. If you have not the vol., we can send it to you bound and post-paid, for $1.]

Washing Machine and Clothes Wringer.—I saw an article in your paper, signed P., from Manchester Vt., on the Union Washing Machine, who says he procured it from the manufacturer, at a distance of over two hundred miles, from a notice he saw in the Country Gentleman, but don't say where that was. I wish to inquire through The Cultivator, where they can be had and at what price? [Of L. Johnson & Co., 457 Broadway, New-York, at $8 to $10] I would say that we have one of Colby's Clothes Wringers, which we have had a few weeks, and we like it first rate so far, as it wrings very dry and don't hurt the clothes. David Berry. *Newington, N. H.*

Harrowing Wheat.—I have determined to harrow my fall wheat. When is the proper time to do so? It is rank, and I have pastured it lightly with sheep. J. O. H. *Kentucky.* [As early in the spring as the frost leaves the ground and the soil becomes dry enough to crumble to a fine powder. Use a harrow with as fine teeth as practicable. If one could be made with numerous fine teeth, pointing a little backward, so as to become strictly what the English writers term a *drag*, the work would doubtless be more perfect.]

Compost.—In tearing down an old house to build again, I had a lot of old plastering; I have mixed it with hog manure and half rotted cornstalks. Will the manure be too strong for garden crops if applied next spring? *Montour, Co., Penn.* [This compost will not be too strong for gardens, unless the amount of lime in the mortar, from some peculiarity of the soil, might be in too large a quantity, which, howeveer is not probable, as it must by this time be thoroughly converted to a carbonate. It is important that this compost be very thoroughly intermixed before applying.]

Inquiry.—I have a valuable yearling heifer, which is large and very fat, but has a hard cough. Any sudden start or slip on the ice causes her to cough several times in succession. I do not know but it is caused by her being so fat, and the flesh pressing on her throat; or is it some disease of the throat or lungs? I have heard it said the Short-Horn breed of cattle are subject to a cough of this kind. Can any of your subscribers give me any information on the subject. S. B. S.
Roxbury, Conn.

Use of Salt.—B. T. R. asks you or me about applying salt to his corn ground. When I apply salt for corn, I put on the salt after the land is plowed in spring, or immediately after the corn is planted, and at the rate of about 280 or 300 lbs. per acre; but that amount will do nothing at killing grubs or worms. If they are to be killed with salt I am afraid it would require enough to kill all vegetation for a time. I believe refuse salt can be got at Syracuse at about $5.50 per ton, delivered on board boat. I bought 18 tons loose salt three years ago at that rate; two years ago I paid 75 cents per barrel of 280 lbs., barrel included.
JOHN JOHNSTON.

Raising Water.—I wish, while some of your contributors were writing articles on Water Rams, some one would send you an article on raising water for barns by a wind mill where Rams cannot be used. B.

Good Hogs.—A correspondent of the *Field Notes*, states Mr. J. C. Smith of Warren County, O., fattened, the past season one hundred head; they were killed and packed by Edward Jones, of Middletown, Butler Co., O., on the 18th day of Dec. They weighed in the aggregate net, 43,154 lbs., being an average of 431 54-100 lbs. In 1860, Mr. S. fattened one hundred head, which averaged 467 lbs.

Agricultural Societies.

Pennsylvania.—The following are the officers chosen by the Pennsylvania State Ag. Society, at their Annual Meeting, held at Harrisburgh, Jan. 21:—

President—Thomas P. Knox.

Vice-Presidents—1st dist., John Rice; 2d, Frederick Showers; 3d, Charles K. Engle; 4th, Robert M. Carlisle; 5th, Wm. Stavely; 6th, Isaac W. Van Leer; 7th, Tobias Barto; 8th, Jos. Graybill; 9th, Martin Early; 10th, Chas. A. Luckenbach; 11th, Daniel G. Driesbach; 12th, Amos E. Kapp; 13th, B. G. Peters; 14th, C. Eberly; 15th, D. O. Gehr; 16th, Thaddeus Banks; 17th, John P. Beck; 18th, James Miles; 19th, Michael G. Traut; 20th, Jas. Slocum; 21st, John Murdock, Jr.; 22d, Moses Chess; 23d, Joshua Wright.

Additional Members of the Executive Committee—William Colder, Jr., J. R. Eby, Jacob Mish, James Young and John H. Zeigler.

Corresponding Secretary—A. Boyd Hamilton.

Chemist and Geologist—S. S. Haldeman.

Librarian—John Curwen.

Bucks Co.—This Society held its Annual Meeting at Newtown, Jan. 16. From the reports submitted we learn that the whole amount received by the treasurer during the year is $1,605.76, and the expenditures for the year were $1,359.09, showing an excess of receipts over expenditures of $246.67. The Society's property amounts to over $7,000, and its debt to about $3,000. The following officers were chosen for the New-Year:

President—Hector C. Ivins.

Vice-President—John Blackfan.

Recording Secretary—John S. Brown.

Corresponding Secretary—Pierson Mitchell.

Treasurer—Silas Cary.

Board of Managers—James C. Finney, Lewis Buckman, Edw. H Worstall, Joseph Fell, James W. Newbold, Isaac B. Brown, William Stavely, Wilson D. Large, Cyrus Hillborn, Alfred Blaker—William R. Beans—William T. Rogers, Edward Taylor, J. Paul Knight, John Robbins.

Ohio State Board of Agriculture.—At the Ohio State Ag. Convention held at Columbus, Jan. 8th, the following persons were elected as members of the Board for 1862: N. J. Turney, Pickaway Co.; Jacob Egbert, Warren Co.; N. S. Townshend, Lorain Co.; H. B. Perkins, Trumbull Co.; T. C. Jones, Delaware Co. Mr. Trimble and Mr. Reber declined a re-election, and Mr. Turney and Mr. Egbert were elected in their place. The Treasurer, G. W. Potwin, not being present to report the financial condition of the Board, D. E. Gardner stated that the Society was never in a better condition, there being over $8,000 in the treasury. After the adjournment of the State Agricultural Convention, the State Board of Agriculture met at their rooms in the State House and organized for 1862, as follows:—T. C. Jones, Delaware Co., President; Henry B. Perkins, Trumbull Co., Rec. Sec.; David Taylor, Columbus, Treasurer; John H. Klippart, Columbus, Cor. Sec. A meeting of the Board was held the next morning, Jan. 9, at which a resolution was adopted to hold the next Fair at Cleveland, conditional upon its compliance with the usual requisites.

Indiana State Board of Agriculture.—The Indiana State Board of Agriculture have elected the following officers: James D. Williams, President; William H. Bennett and S. Fisher, Vice-Presidents; William H. Loomis, of Indianapolis, Secretary; H. A. Fletcher, of Indianapolis, Treasurer; J. D. Williams, S. Fisher, C. Fletcher, jr., A. D. Hancock and W. H. Bennett, Executive Committee. The Tenth Annual Fair will be held in Indianapolis, commencing September 29th, and will continue during the week.

American Pomological Society.—The President of this national association, Hon. Marshall P. Wilder, has appointed Sept. 17, 1862, for the commencement of its ninth session, which is to be held in Boston. This institution was established in the year 1848, and has held meetings in the cities of New-York, Boston, Philadelphia, Cincinnati and Rochester, and has exerted a powerful influence in systematizing and advancing the science of Pomology throughout the Union. In conjunction with this appointment, the Massachusetts Horticultural Society have ordered its annual exhibition for this year to take place on the same week.

☞ I consider the Country Gentleman one of the best agricultural papers published in this country, and its truly national spirit should commend it to all true Union men who are interested in agriculture or horticulture.
Baltimore, Jan. 15, 1862. J. L. D.

[From the Boston Post.]

COE'S SUPERPHOSPHATE OF LIME.

Evidence of its Excellence and Superiority.

The following letter, written by Dr. GEORGE B. LORING of Salem, we regard as one of the strongest attestations in favor of the Superphosphate of Lime that has yet been published. Dr. Loring is a gentleman of the highest intelligence, and is an experienced, almost life-long, agriculturist—one whose practical acquaintance with crops, lands, tillage, and in fact all the details of farming, is only equalled by the scientific knowledge of which he is the possessor. Managing a very large and well known estate in Essex county, where he has been able to give the article a thorough trial, h's commendation of Coe's Superphosphate of Lime carries unusual weight. His position as an influential and respected member of society will also cause his opinion to be closely regarded.

SALEM, Dec. 19, 1861.

Gents—I am happy to state that the experiments made with your Superphosphate of Lime last spring, were highly successful.

I used it on corn and root crops, and in my garden, both alone and combined with other manures. Upon a piece of new land, about seven-eighths of an acre, into which I turned with the sod eight cords of barnyard manure, composted with sand and muck, I applied a small quantity of Superphosphate in the hill, and planted it with corn. The land was a strong clay loam. The growth of the corn was very vigorous, and the yield was eighty-seven bushels. I turned the barnyard manure under the sod, not because I approve of such a mode of applying manure. but because I thought it might serve future purposes, and in order to test more fully the merits of the Superphosphate.

In preparing my land for roots, especially mangolds and ruta bagas, I also plowed in barnyard manure, and drilled the land for sowing. In the drills I used manure, ashes and Superphosphate; and of the three I found the last furnished me with the heaviest crop.

As a stimulant to early garden produce, I found it invaluable.

When used alone it is a convenient substitute for manures of a greater bulk. How long its effects would last in this way I cannot say. But combined in the manner I have represented, it evidently hastens crops in our short seasons, and of necessity increases them largely. Yours truly, GEORGE B. LORING.

Messrs. Coe & Co., 19 Broad-St., Boston. Feb. 27—w&m1t.

CRANBERRY PLANTS

OF THE BELL VARIETY.

Bearing, plants, $3 per 1,000. Send for circular.

New Rochelle or Lawton Blackberry—canes well rooted, $3 per 100.

Raspberry canes, well rooted, of all the choice kinds.

Grapevines—Delaware, Concord, Hartford Prolific, and other new and choice varieties, at low prices.

Hop Tree, (Ptelia Trifolia,) for ornament and use. For sale by

F. TROWBRIDGE & CO., Nurserymen & Dealers,
Feb. 27—w4tm1t. New-Haven, Conn.

ENGLISH PRIZE CUCUMBERS.—

The best varieties for forcing, many of them from fifteen to twenty-four inches long. They will be mailed, postpaid, to any address upon receipt of the price affixed:

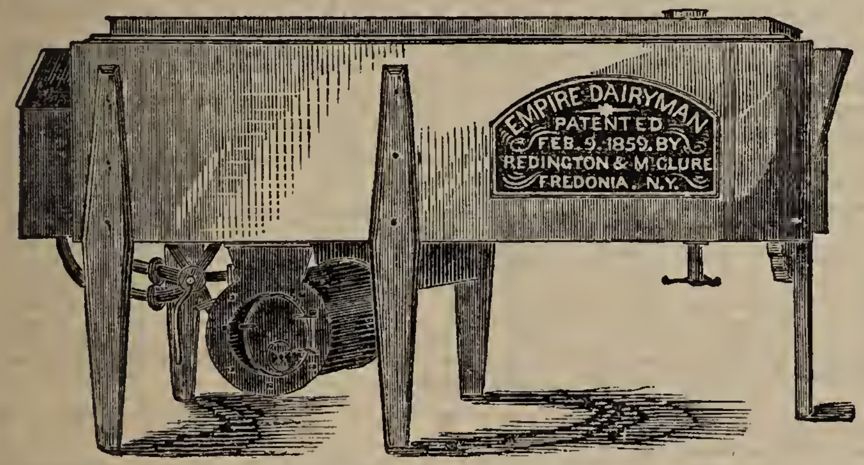
	Per Packet.
Ayre's Perpetual Black Spine,	25 cents.
Chinese. new, green, very long,	10 "
Colney Hatch,	25 "
Carter's Sultan,	25 "
do Champion,	25 "
Cuthill's Black Spine,	25 "
Gladiator,	10 "
Gigantic White,	25 "
Lord Kenyon's Favorite,	25 "
Lynch's Star of the West,	25 "
Gen. Canrobert,	25 "
Ipswich Standard,	25 "
Minster Abbey.	25 "
Roman Emperor,	25 "
Ne Plus Ultra,	10 "
Sir Colin Campbell.	25 "
Victory of Bath,	10 "
Sion House,	25 "
Weeden's Symmetry,	25 "

Address B. K. BLISS, Springfield, Mass.
Feb. 20—w3tm1t.

EMPIRE DAIRYMAN,

PATENTED FEBRUARY 9, 1859, BY

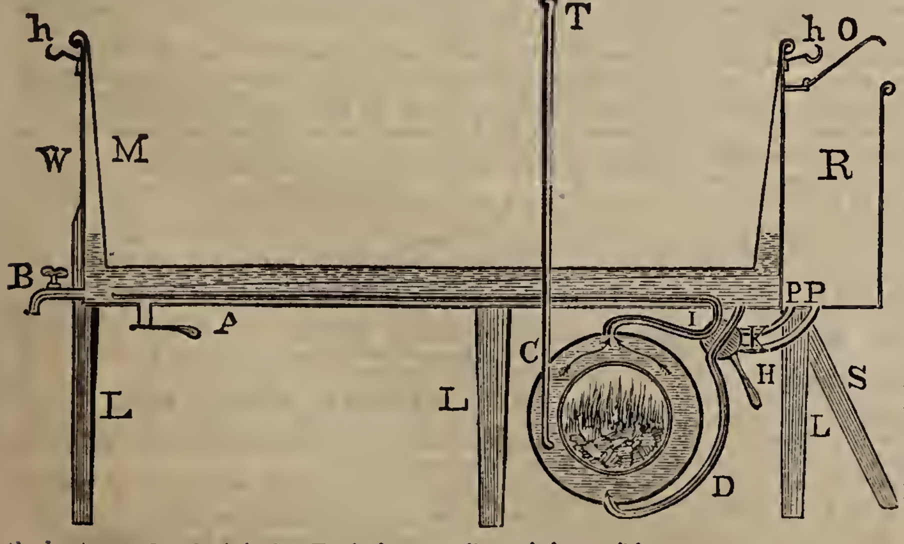
REDINGTON & McCLUER Fredonia Chautauque Co. N. Y.



DESCRIPTION OF THE APPARATUS.

The annexed plate is a sectional drawing of the apparatus, in which M represents the milk vat inserted into the water vat W. The milk vat is held to its place by the hook—hinges h h. B represents the faucet for drawing off the water under the milk. A is the whey cock. L L L are three of the legs—the apparatus has six legs.- S the swing legs for lowering or raising one end of the apparatus. The faucets A and B are now inserted at the end where the swing legs S are fixed. The reservoir for hot water is placed at the end R. It is made of galvanized iron, with an iron lid or cover O, to prevent the escape of steam when the water is boiling. The heater C is a double cylinder, with door register and damper in front. and pipe-funnel on the back end. In this heater the water circulates freely between the two cylinders around the fire. From this heater there are two openings by pipes—one from the top, the other from the bottom of the heater. These two pipes, I and D, connect with six way-cock K. The six way-cock has two openings into the water vat, also two openings into the hot reservoir, P P. When the handle of the six way-cock H is turned down, as in the engravings, the passage from the heater into the water box are open, and when fire is kindled, the warm water rises through the opening in the top, and passing along a tube in the bottom of the water vat, is distributed under the milk vat. At the same time the cooler water in the water vat runs back down the pipe D, and enters the heater at the bottom, to be warmed and raised again into the water vat. This circulation continues increasing the temperature of the milk gradually and uniformly until the requisite heat is attained, when by raising the lever H, the openings to the water vat are shut, and those into the hot water reservoir are opened, and by a similar circulation the water is heated there for scalding.

There is a point at half turn of the handle H where the openings to the heater are closed. To prevent any accident from carlessness in leaving the lever at half turn, the safety-pipe T is inserted into the heater. This will give warning if the lever is wrong by raising the water so that it will run over the top of the tube, and if allowed to run too long, will be apt to burn the packing in the heater, and make it leak. Explosion or collapse is impossible.



Pamphlets containing full particulars will be furnished on application to the proprietors, REDINGTON & McCLUER, Fredonia. N. Y.
Feb. 20—w1t—m1t.

LARGE VINES OF THE CONCORD, CREVELING, DELAWARE, DIANA, HARTFORD PROLIFIC and REBECCA, for immediate bearing. Prices reasonable. Catalogues sent to applicants enclosing stamp. HEFFRON & BEST,
Feb. 6—wtfm3t. Utica, N. Y.

TRUE DELAWARE GRAPEVINES,

FROM THE ORIGINAL VINES,

One year old, 50 cents to $1; 2 years old, and sfrong layers with fruit wood, $1.50 to $2. Less by the dozen or hundred.

Also Cuyahogas at $1 to $1.50; Allen's and Roger's new Hybrids, Crevelings, Dianas, Concords, Hartford Prolific, Rebeccas, and

Many other Valuable Kinds, New and Old,

at as low prices as they can be had from any reliable source.

Descriptive price lists sent to all applicants.
Feb. 13—w9tm2t. GEORGE W. CAMPBELL, Delaware, Ohio.

OSIER WILLOW—Salix Purpurea.—Cuttings and Plants at low prices. HEFFRON & BEST,
Feb. 6—wtfm3t. Utica, N. Y.

OSIERS—PURPUREA, VIMINALIS, TRIANDRIA, and six other finest varieties—$2 to $3 per 1000 Scions. Grape and other cuttings; Fruit Tree Grafts, Seeds, &c., of all kinds, at low rates.

Honey Locust Seed 40 cents; Yellow Locust 65 cents; Osage Orange $1 per pound. PRINCE & CO.
Jan. 30—w&m1t. Flushing, N. Y.

A NEW GOOSEBERRY AND NEW RASPBERRY

from the great West. The Gooseberry is large, smooth, prolific, of fine flavor, and free from Mildew. The Raspberry is a black cap, even larger and finer than Doolittle's Improved. Circulars sent on application. HEFFRON & BEST, Utica, N. Y.
Feb, 6—wtfm3t.

NEW AND CHOICEST VEGETABLE AND FLOWER SEEDS.

BY MAIL POSTPAID.

The subscriber offers the following selection of RARE SEEDS, on terms to suit the times: The new French Tree Tomato. This has the form of a tree, about two feet high, and is self-supporting. Fruit large, color scarlet, very productive, and of good quality. Also Lester's Perfected, and the Scarlet and Golden Cluster Tomatoes.——The Pomegranate; fruit about the size and color of the Lemon; extra for sweetness.——Asparagus Bean, a variety—the pods attain the length of two to three feet. When young and tender we cook these pods, and serve as asparagus, which are very delicious.——Strawberry Pea, in height about six inches, very prolific, of good size and quality.——New variety of Spring Wheat from Japan; the most productive grain known to us.——Also an extra variety of Red Sweet Corn, Paris Red Cos, and India Lettuce; German Sweet Turnip, Cabbage, Sea Kale, Mammoth Mustard, Japan Pie Melon, Negley's Improved Cucumber, Madras Radish, very choice, fine solid pods for pickling or salad: Dwarf Broom Corn, Hubbard and Pineapple Squash, &c.

Our FLOWER SEEDS will include many of the new and choice varieties, such as Hunt's Sweet Williams, Double Zinnia Elegans, HEDDEWIGI, (new Japan Pink,) Asters, (new and rare sorts mixed,) Hyacinth Flowered Larkspur, Verbena, Acroclinium Roseum, Gaillardia grandiflora, Chrysanthemum,(new.) Camellia Balsams, Lythum Roseum, Blue Bells of Scotland, Godetia, Bee Larkspur, Prussian and Dwarf Morning Glories, Salpiglossis, Red and Blue Tassal Flower, Green Centered Helianthus, Rose of Heaven, Marvel of Peru, German Stock Gilliflower, Golden Bartomia, Petunia, SOLANUM, (atropurpureum,) a splendid parlor plant; Scarlet Egg Plant, Evening Primrose, Snapdragon, Portulaca, Forget me-not, &c., &c.

Any person may select ONE PAPER of either of the above varieties of Seeds, and remit to us ONE DIME, or 5 papers 25 cents; ten papers 40 cents; twenty papers, 75 cents; or thirty papers for $1. You can select a part from the Vegetable and a part from the Flower Seeds to make out these numbers, if you choose. Send current bills, small silver or gold coin, or United States postage stamps.
Jan. 23—w2tm2t. L. NORRIS, Windsor, Ashtabula Co., Ohio.

IMPORTANT TO CHEESE MAKERS.

THE ONEIDA CHEESE VAT,

Ralph's Patent, is superior in practical utility, material and workmanship to any in use. Though but recently patented and introduced to the public, the demand for them is unprecedented. Circulars containing a general description, sizes and prices, sent by mail on application to WILLIAM RALPH, Holland Patent, N. Y., of whom State, County and Town rights for this valuable improvement may be obtained on reasonable terms. Jan. 16—w&mtf.

Agricultural Books for Sale at this Office.

SHORT-HORNS AND ALDERNEYS FOR SALE.

The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,
Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

BERKSHIRE SWINE AND YOUNG SHORT-HORN BULLS FOR SALE.

Berkshire Sows to produce litters in April and May next varying in price from $20, $15 and $10 each, and Boars old enough for propagation, at the same prices. Boxed and delivered on rail car or shipboard. L. G. MORRIS.
Jan. 23—w&mtf. Scarsdale P. O., Westchester Co., N. Y.

GOODRICH'S SEEDLING POTATOES.

I. VARIETIES.—1. GARNET CHILI, red. 2. PINK EYE RUSTY COAT, white. 3. CUZCO, white. These three are all round, and ripen with the season. The first two yield very largely, and possess a higher degree of hardiness and adaptation to all soils and weather, than any other sorts known to me. The Cuzco is a little less hardy, but is the largest yielder within my knowledge. 4. COPPER MINE, slightly copper colored, longish, in hardiness like the Cuzco, and two weeks earlier than the three preceding.

These four sorts have all white flesh, GROW CLOSELY in the hill, do not PUSH OUT of the soil, and are very smooth and beautiful, except that the Cuzco is a little deep eyed. In most localities they have all acquired a good character for table quality. They have been selected in a thirteen years experiment, from more than ten thousand new seedlings. In good soils and seasons, and with fair culture, they will readily yield from 250 to 350 bushels to the acre, while in the hands of many of my correspondents, they have far exceeded those figures.

☞ I have no very early sorts that are well tested, but hope to have such by 1864.

II. AGE AND DIFFUSION.—The Garnet Chili is a seedling of 1853, and has been before the public for six years. It is now more extensively cultivated than any other new variety, and is beginning to be sold under new names. The other three sorts are seedlings originated in 1856, and have been in market but two years. They are all already known in nearly every State north of Virginia and Kentucky, and in Canada.

III. PRICE.—$3 (three dollars) per barrel of 140 lbs., $1.50 per bush., $1 per half bushel, and 50 cents per peck. CASH IN ADVANCE. The larger price is charged for the smaller quantities from the proportionably greater cost of packing and delivery.

IV. TRANSMISSION.—They will be forwarded by railroad, canal or express, as shall be directed. The sorts shall be kept distinct, and the packages carefully directed. The sorts will be described in a printed sale bill, with directions for potato culture, which will be forwarded by mail when the potatoes are sent.

☞ Sums of less than $1 may be sent in 3 cent postage stamps.

☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.

CHAUNCEY E. GOODRICH, Utica, N. Y.

REFERENCES.—From among very numerous persons who have cultivated these and others of my seedlings for the last two years, I select the following:—George Buckland, Toronto, Canada West: Geo. Bachelder, Stanstead, Canada West. H. M. Cram, Vergennes, and Albert Breese, Hubbardston, Vt. Charles H. Gleason, Holden, Wm. Bullard, Dedham, and Wm. F. Bassett, Ashfield, Mass. Horace Humphrey, Winchester Corners, Ct. Jesse Vaughn, Cheektowaga, Samuel J. Wells, Fayetteville, E. W. Howell, North Chili, O. C. Chapin, East Bloomfield, John Bowman, Baldwinsville, and Edward Merritt, Poughkeepsie, N. Y. W. W. Griscom, Woodbury, and Benj. Sheppard, Greenwich, N. J. P. B. Gray, Half Moon, P. Sutton, Pittston, and Aaron Bombaugh, Harrisburgh, Pa. Yardley Taylor, Loudon Co., Va., J. Howard McHenry, Baltimore, Md. J. C. Holmes, Lansing, and S. T. Douglas, Detroit, Mich. S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill. Feb. 13w&m.

STEEL PLOWS

We are now manufacturing a superior **Steel Plow,** intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use:

John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mobawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do, do. with cast point,................	14.00
"Empire," No. 1, with cast point, full trimmed,............	15.00
For Three-Horse Plows,......................	$1.50 extra.
For Adjustable Beams, ...	1.00 do.

We also manufacture Sayre & Klink's Patent Tubular Shank

STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order

☞ SEND FOR A CIRCULAR. ☜

REMINGTONS, MARKHAM & CO.,
Ilion, Herkimer Co., N. Y.

E. REMINGTON & SONS,
BENJAMIN P. MARKHAM,
GEO. TUCKERMAN.

March 21—w&mtf.

Coe's Superphosphate of Lime.

The following decisive testimony to the value of Coe's Superphosphate as a superior fertilizing agent, is from Hon. Amasa Walker of Massachusetts:

North Brookfield, Nov. 26, 1861.

Messrs. Coe & Co., Boston—Gentlemen; You may recollect that I had of you last spring a quantity of Superphosphate of Lime. I made use of it in several ways—in each case with satisfactory results. First, on corn. I planted one part of a field with the use of fifteen loads of barn manure to the acre, and the other part with your phosphate—a small handful in each hill, probably at the rate of three hundred pounds to the acre. That which was planted in the latter way was quite as vigorous and thrifty as in the former, and yielded as largely. This much exceeded my expectations. Secondly, I used the phosphate in planting potatoes, and obtained an excellent crop in exhausted pasture land, plowed up for the purpose. Thirdly, I used the article for a dressing for an oat crop—with no other manure. and the land previously in low condition. I got 40 bushels to the acre, by the application of 300 pounds of phospate.

Fourthly, I applied it upon an old and long exhausted pasture land, at the rate of 600 pounds to the acre. The effect was wonderful, and where almost nothing of any kind had previously grown, I had a full growth of white clover, which the cows fed down too closely, and which showed itself so green, as compared with its surroundings, that it would be plainly distinguished at a great distance.

I made a similar experiment with your phosphate five years since, on a part of the same pasture, and the good effects of it were as visible last year as ever. A rich sward is formed where there was formerly nothing but gray moss and a little struggling June grass.

From these and other similar experiments made for several years, I am satisfied that our old pastures, many of which have been grazed for the greater part of a century, and have become so exhausted by cropping as to be almost worthless, may be rendered very fertile by the application of Superphosphate and other similar fertilizers, and at a cost that will pay. Lean pastures are the greatest drawbacks upon our agriculture in the older parts of New-England. To keep cows through the winter and half starve them all summer, is not a very profitable, though very common operation.

I have this fall sowed my winter wheat with phosphate alone for manure, at the rate of 300 pounds to the acre; and although the land was the poorest and most exhausted I had on my farm, I have no doubt of a good crop. We are succeeding admirably with wheat in this part of the State, and artificial fertilizers aid us very much. One strong argument in favor of phosphate of lime, and similar manure, is that they can be transported to fields at a considerable distance with little extra cost. I applied my barnyard manure and compost in fields near home, and cultivate all distant lots with portable manure.

My intention now is to use a much larger amount of the Superphosphate of Lime next year than I have done before, especially on corn and grass lands. I am, very respectfully, your obedient servant.

(Signed) AMASA WALKER.

COE'S SUPERPHOSPHATE OF LIME.—

Office 19 Broad-Street, Boston.

For Testimonials of the value of this article, address COE & CO. as above.

April 4—w1y.

BERKSHIRE PIGS FOR SALE—

OF PURE BREED.

$5 each when six weeks old.

WM. J. PETTEE,
Lakeville, Conn.

Jan. 9—w&mtf.

THE FARMER'S LIBRARY.

We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 8th vol. of which is now completed. The price of the Eight volumes, handsomely bound in muslin, is 75 cents each at this office, or $1.00 each sent by mail, post paid. Either volume from 1 to 8, can be had separately at the same price. The Eight volumes will be sent per Express to any part of the country, on receipt of $6.

"RURAL AFFAIRS"---2 vols. 12 mo.

These volumes consist of a reprint of our Illustrated Annual Register, from its commencement to 1860, with the omission of the Calendar pages and advertisements, and comprise a great amount of matter relating to almost every subject of interest to the Country Resident, and are illustrated with over Eight Hundred Engravings, including Laying Out and Planting Ornamental Grounds and Farms, Plans of Farm Houses and Cottages, School Houses, Barns, Ice and Smoke Houses, Garden Structures, Domestic Animals, Farm Implements and Machines, Fences and Gates, Plants, Trees, &c., &c. No Farmer's Library should be without this work. Price $2—or $1 each, sent by mail prepaid.

L. TUCKER & SON.

THE BEST OF STOCK—IMPORTED SILESIAN SHEEP and their descendants—Morgan and Messenger Horse Stock, of as good blood as can be found in the United States; and Suffolk Pigs. Address WM. H. LADD, Richmond, Jefferson Co., O

Feb. 14—w1y.

100,000 BARRELS OF THE

LODI MANUFACTURING CO.'S POUDRETTE

FOR SALE BY

JAMES T. FOSTER,

No. 66 Cortlandt-St., New-York.

THE large facilities which they enjoy by exclusive contract for all the night soil of the city of New-York, and the large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking COST and YIELD into consideration. It will be sold at the usual price of $1.50 per barrel for seven barrels or over, delivered free in New-York city.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-Street, to No. 66 CORTLANDT-STREET.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call attention to the following experiences of practical farmers in different sections of the country:

North Pembroke, Mass., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., etc., with indifferent success, in the spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last spring I procured from your branch office in Boston about 30 barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I plowed about two acres of light sandy soil, which had laid in grass about six years (the last crop of grass being very light.) This I planted with corn and potatoes, applying about four and a half barrels of Poudrette, with no other manure, except a handful of ashes to each hill at the first hoeing, and from present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

Merrill, Me., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first I got sick of it, and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor who bought the other barrel says if he had bought five barrels more he would have saved the price of twenty barrels. Yours, &c.,

V. B. PAUL.

Waldo, Me., Oct. 12, 1861.

To to the Lodi Manufacturing Co.:

Gentlemen—Last spring I bought from Cross & Newell one barrel of your Poudrette, as an experiment, with but very little faith in its utility. I put it on 6 rows of corn in different parts of the field, after manuring with barn-yard manure in the usual way—at the second time hoeing, where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year

Yours, &c., WELLINGTON SHOREY,

Smyrna, Del., Oct. 1, 1861.

Gentlemen—I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it. Yours, respectfully,

JOHN G. BLACK.

Chester, Pa., Sept. 14. 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette, and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Needle's New Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.

Yours, &c., A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address

"JAMES T. FOSTER,"
Care of Lodi Manufacturing Co.,
66 Cortlandt-St., New-York.

Jan. 2—w13tm3t.

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COTTON-WOOD CUTTINGS.—

On the receipt of a quarter of a dollar, I will forward by mail, to any adress, a package of cuttings of the

GREAT WESTERN COTTON-WOOD,

one of the largest and most magnificent trees of the western forest. The Cotton-wood is very easy of propagation, and remarkably tenacious of life; the cuttings take root more readily, the tree grows more rapidly, and bears transplanting with less inconvenience than any other forest tree, attaining at the age of 3 or 4 years a height of from 15 to 25 feet, with a wide, dense pyramidal head, putting on its foliage early in the spring, and retaining it till late in the fall, affording an amount of rich, luxuriant shade not to be obtained by any other means in the same time. The tree flourishes in every variety of soil from the rich alluvial river bottom to the highest sandy ridges. The cuttings will be taken from young thrifty trees, and if planted according to directions, which will accompany each package, will all be sure to grow. Parties wishing to adorn their grounds with a novelty, and one of nature's noblest ornaments, can do so at a trifling cost by addressing HENRY CHAPMAN, Waterloo, Blackhawk Co., Iowa.

Feb. 20—w&m1t.

LETTERS ON MODERN AGRICULTURE, by Baron Von Liebig—just published, and for sale at this Office. Sent by mail, post-paid, for $1.

FLOWER SEEDS!—VEGETABLE SEEDS.

CHOICE AND RELIABLE FLOWER SEEDS.

See B. K. Bliss' Descriptive Seed Catalogue.

CHOICE AND RELIABLE VEGETABLE SEEDS.

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COLLECTIONS OF FLOWER SEEDS,

Containing none but the most desirable varieties of the easiest culture, mailed to any address in the Union, postpaid, for $1, $2, $3, $5 and $10.

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COLLECTIONS OF KITCHEN GARDEN SEEDS,

For one year's supply, containing none but the most approved and useful sorts, proportioned to suit gardens of various sizes, at the following prices: $1, $2, $3, $5, $10 and $20 each. The $1 and $2 collections will be sent by mail, postpaid. For particulars

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AGRICULTURAL SEEDS.

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Prices moderate. Seeds warranted genuine. Catalogues containing accurate descriptions of **1,350 varieties of Flower Seeds,** and upwards of **350 varieties of Vegetable Seeds,** with special directions for the culture of each variety, will be mailed to all applicants enclosing a three cent stamp. Address B. K. BLISS,

Feb. 20—w3tm1t. Springfield, Mass.

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PURPLE EGG PLANT.

Seeds of this highly improved variety mailed at 40 cents per ounce, or 10 cents per packet. Remit in stamps. Address

ROBERT BUIST & SON, Seed Growers & Nurserymen,

Feb. 20—w2t. Philadelphia.

NEW FRENCH ERECT OR TREE TOMATO

(De Lage.)

Grows in the form of a bush, very showy, productive, and of good flavor, (50 seeds.) 15 cents. LESTER'S PERFECTED TOMATO, true, (100 seeds,) 10 cents.

The above will be mailed to any address upon receipt of the price affixed. Feb. 20—w6tm1t. B. K. BLISS, Springfield, Mass.

DEVONSHIRE CATTLE FOR SALE.—

One Devonshire bull, 4 years old last summer, bred by George Vail, Esq., Troy; a good and sure stock getter, will be sold at a price corresponding with the times.

Also two Bull calves, 2 months old, sired by the above, dams from the Wainwright and Hurlbert stock. Apply to M. VASSAR.

Feb. 20—wonceam4t. Po'keepsie, N. Y.

JOSEPH BRECK & SON,

SEEDSMEN & FLORISTS,

51 & 52 North Market-St., Boston,

Offer for sale the choicest collection of VEGETABLE SEEDS to be found in this country, including every new and rare variety, of their own raising or importation, and are warranted reliable in every respect.

By remitting $1, $2, $3, $5 or $10 we will send, free of charge, liberal assortments put up for family use as may be wanted.

Our collection of FLOWER SEEDS, embracing everything new from London, Hamburgh and Paris, are from the best Florists of Europe, and have always proved to be good and true. Such as are raised best in this country are grown by our senior partner, JOSEPH BRECK, Esq., President of the Massachusetts Horticultural Society, whose well known love of flowers will not allow any that are not really fine to grow in his garden, or the seeds from indifferent ones to be sold.

By remitting $1, $2, $3, $5 or $10 the finest selections will be made by himself, and forwarded. Catalogues gratis. Feb. 20—w6tm2t.

BEES—The subscriber will sell a large nunber of

ITALIAN BEES,

the queens, or full colonies—Two hundred stocks of common bees—Glass honey boxes—Books on Bee Culture, &c. Circular with prices sent on application. Address M. QUINBY,

Feb. 20—w3tm2t. St. Johnsville, Montgomery Co., N. Y.

THOROUGH-BRED DEVONS.—

BULLS AND HEIFERS,

from imported stock. For sale by EDWARD G. FAILE,

Feb. 20—w1yr.* West Farms, Westchester Co., N. Y.

SPANISH AND DORKING FOWLS.—

Wanted—about 40 Spanish hens and 4 cocks. Also 10 to 15 Dorking hens. Any person having the pure breed, at a fair price, can find a customer by applying to CBARLES LOWTHER,

Feb. 20—w1t.* 129 West Eleventh-St., New-York City.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY, N. Y., APRIL, 1862. No. 4.

PUBLISHED BY LUTHER TUCKER & SON
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

THE CULTIVATOR has been published twenty-eight years. A NEW SERIES was commenced in 1853, and the nine volumes for 1853, 4, 5, 6, 7, 8, 9, 60 and 61 can be furnished, bound and post paid, at $1.00 each.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

The Cultivator & Country Gentleman.

PRACTICAL HINTS FROM ABROAD.

The Operations of Farmers' Clubs.

As an example of the way in which the meetings of many of the most successful Farmers' Clubs in England are managed, our readers will be interested in the following list of subjects for the monthly meetings of the "Wirral Agricultural Improvement Society," for 1862. The name which follows each subject, is that of the member of the club who has agreed to prepare and read a formal paper upon it; other members are also expected to be ready to join in a discussion of the views thus propounded, after the reading of the paper. Particularly when the writer is supposed to hold views that differ in any way from those of his neighbors, there are never lacking among them some who are ready either to combat or support the opinions expressed, and the result is a valuable, well considered, animated and useful debate, in which no little experience and not a few new facts are brought to light, and which the agricultural journals profitably and gladly publish at great length. Many of the subjects in the following programme are quite as important here, as they are in England; and we wish that our Clubs might be led to take up similar questions in a similarly exhaustive and earnest way :—

February—Best means of improving poor meadows.—R. Jackson.

March.—The breeding and rearing of farm stock.—Burnham.

April.—The cheapest mode of obtaining portable manure. Wm. Turner.

May.—The amount of cottage accommodation required on an arable farm.—Russell.

June.—The relations between the employer and the employed in agriculture.—Hope Jones.

August.—To what extent can we profitably use steam power on the farm ?—James Lockhart.

October.—Are restrictions in the plowing of grass fields profitable to landlord, tenant or the public ?—Russell.

November.—The winter feeding of stock.—Richard Barton.

December.—A silver cup or medal will this day be awarded to the member who produces the best essay and review of the subjects above named, and the discussions thereon during the session.

The Value of Manures Tested by Analysis.

In what we have said in these columns with regard to the worthlessness of *Analysis of Soils*, as a measure or test of their productive capacity, we have never intended to utter a word that should cast a doubt upon the great and well proven importance of analysis as a means of ascertaining the pecuniary value of *artificial manures.* We have lately found, however, that some manufacturers of these articles have skillfully availed themselves of the discredit into which the investigations of the chemist have fallen as to the composition of the soil, to diffuse quietly but yet extensively, the notion that they are equally useless in a practical point of view, as a test of the value of purchased fertilizers. If analysis happens to prove them of a real value astonishingly small, as compared with the price at which they are sold, the materials entering into their composition are conveniently supposed to have been "progressed" in some way altogether inexplicable to science, to a degree of "practical" efficacy which science is equally unable to understand.

Now, in Great Britain, this matter is well understood. No respectable manufacturer of Manures objects to the test of analysis, and farmers have learned to base all their calculations as to cost and return, upon the result it gives. This is illustrated in quite frequent information given through the agricultural papers, as to the commercial value at current rates, of some fertilizer, the analysis of which has been submitted for examination, by readers desirous of reliable advice. As an instance of this kind, we may quote the answer to such an inquiry contained in the last North British Agriculturist, which happening to come to our notice as we write, suggested to us the foregoing remarks. The inquirer asks the value of the separate ingredients of the manure analysed, and of the whole in quantity; and we copy below the answer he receives:

Calculated by the 100 tons, the following will give the commercial value :—

	Per Centage.	Per Ton.	Per 100 tons.
Soluble phosphates,........................	8	£23 0	£184
Insoluble phosphates,........................	4	7 0	·28
Sulphate of ammonia,........................	20	15 0	300
Sulphate of magnesia,........................	3	—	—
Sulphate of potash,........................	1	8 0	8
Hydrated sulphate of lime,..................	30	0 10	15
Muriate of soda,.....	20	0 10	10
Insoluble matter and moisture,..	14	—	—

Value of 100 tons.................................... £545
Value of 1 ton, £5, 10s.

The manurial value of the manure of which the analysis is given, depends mainly on the percentage of sulphate of ammonia present.

[For the Country Gentleman and Cultivator.]

THE CONDITIONS OF GERMINATION.

By Prof. Samuel W. Johnson.

The plant begins with the seed. The embryo is a plant in miniature, or rather in most cases, it contains a rudimentary organism, which under certain influences is capable of developing into a plant.

The first process of development wherein the young plant commences to manifest its separate life, and in which it is shaped into its proper and peculiar form, is called germination.

In the mature seed when kept from excess of moisture, the embryo lies dormant. The *duration of its vitality* is very various. The seeds of the willow and coffee will not grow after having once become dry, but must be sown when fresh; the former loses its germinative power in two, the latter in six weeks after ripening.

With regard to the duration of the vitality of the seeds of agricultural plants, there is no little conflict of opinion among those who have experimented with them. The leguminous seeds appear to remain capable of germination during long periods. Girardin sprouted beans that were over a century old. Grimstone with great pains raised peas from a seed taken from a sealed vase found in the sarcophagus of an Egyptian mummy, presented to the British Museum by Sir G. Wilkinson, and estimated to be near 3000 years old. The seeds of wheat usually lose their power of growth after having been kept 3 to 7 years. Count Sternberg is said to have succeeded in germinating wheat taken from an Egyptian mummy, but only after soaking it in *oil*. He relates that this ancient wheat manifested no vitality when placed in the soil under ordinary circumstances, nor even when submitted to the action of acids or other substances which gardeners sometimes employ with a view to promote sprouting. Vilmorin doubts altogether the authenticity of the "mummy wheat." The fact appears to be, that the circumstances under which the seed is preserved, greatly influence the duration of its vitality.

In agriculture it is a general rule, that the newer the seed the better the results of its use. Experiments have proved that the older the seed the more numerous the failures to germinate and the weaker the plants it produces. Loudet made trials in 1856–7, with seed wheat of the years 1856, '55, '54 and '53.

The following table exhibits the results, which illustrate the statement just made:

	Per ct. of seed sprouted.	Length of leaves 4 days after coming up.	No. of stalks & ears per hundred seeds.
Seed of 1853,	none	——	——
do. 1854,	51	04—0.8 inch.	269
do. 1855,	73	1.2 do.	365
do. 1856.	74	1.6 do.	404

The fact that old seeds yield weak plants, is taken advantage of by the florist in producing new varieties. It is said that while the one-year old seeds of ten-weeks-stocks yield single flowers, those which have been kept four years give mostly double flowers.

The general process and conditions of germination are familiar to all. In agriculture and ordinary gardening, we bury the ripe and sound seed a little way in the soil, and in a few days it usually sprouts, provided it finds a certain degree of warmth and moisture.

Let us attend somewhat in detail to the phenomena of germination, and to the requirements of the awakening seed. We observe that the seed first absorbs moisture, in consequence of which it swells and becomes more soft; we see the germ enlarging beneath the seed-coats, shortly the integuments burst, and the rootlet or radicle appears; afterward the plumule or stem becomes manifest. In all agricultural plants the radicle buries itself in the soil and avoids the light. The plumule ascends into the atmosphere and seeks exposure to the direct sunbeams, where it shortly unfolds new leaves, and if coming from the seed of a branched plant, lateral buds make their appearance. The radicle divides and subdivides, in beginning the issue of true roots. When the plantlet ceases to derive nourishment from the mother seed, the process is finished.

As to the conditions of germination, we have to consider the following:

The soil is usually the medium of moisture, warmth, &c., and it affects germination only as it influences the supply of these agencies; it is not otherwise essential to the process. The burying of seeds when in the field or garden, serves to cover them away from birds and keep them from drying up. In the forest at spring time, we may see innumerable seeds sprouting upon the surface, or but half covered with decayed leaves.

A certain range of warmth is essential. Goeppert, who experimented with numerous seeds, observed none to germinate below 39° Fahrenheit. Sachs has ascertained for various agricultural seeds, the extreme limits of warmth at which germination is possible, The lowest temperatures range from 41° to 55°; the highest from 102° to to 116°. Below the minimum temperature the seed preserves its vitality; above the maximum it is killed. He finds likewise that the point at which the *most rapid* germination occurs, is intermediate between these two extremes, and lies between 79° and 93°. Either elevation or reduction of temperature from these degrees, retards the act of sprouting.

In the following table are given the special temperatures for six common plants:—

	Lowest Temperature of	Highest. Germination.	Temperature of most rapid Germination.
Wheat,..............	40 deg. Fah.	104 deg. Fah.	84 deg Fah.
Barley,.......... ...	41 do.	104 do.	84 do.
Pea,................	44.5 do.	102 do.	84 do.
Maize,..............	48 do.	115 do.	93 do.
Scarlet Bean,.......	49 do.	111 do.	79 do.
Squash,.............	54 do.	115 do.	93 do.

For all agricultural plants that are cultivated in New-England a range of temperature of from 55° to 90° is adapted for healthy and speedy germination. It will be noticed in the above table that the seeds of plants introduced into northern latitudes from tropical regions, as the squash, bean and maize, require and endure a higher temperature than those native to temperate latitudes, as are wheat and barley. The extremes given above are by no means so wide as would be found, were we to experiment with other plants. It is probable that some seeds will germinate nearly at 32 deg., or the freezing point of water, while the cocoa nut is said to yield seedlings with the greatest certainty when the heat of the soil is 120 deg.

Sachs has observed that the temperature at which germination takes place materially influences the relative development of the parts, and thus the form of the seedling. According to this industrious experimenter, very low temperatures retard the production of new rootlets, buds and leaves. The rootlets, which are rudimentary in the embryo, become, however, very long. On the other hand very high temperatures cause the rapid formation of new roots and leaves even before those existing in the germ are fully unfolded. The medium and most favorable temperatures bring the parts of the embryo first into development, at the same time the rudiments of new organs are formed, which are afterward to unfold.

A certain amount of moisture is indispensable to all growth. In germination it is needful that the seed should absorb water so that motion of the contents of the germ-cells can take place. Until the seed is more or less imbued with moisture, no signs of sprouting are manifested, and if a half-sprouted seed be allowed to dry, the process of growth is effectually checked.

The degree of moisture which different seeds will endure or require, is exceedingly various. The seeds of aquatic plants naturally germinate when immersed in water. The seeds of many land plants indeed will quicken under water, but they germinate most healthfully when moist—but not wet. Excess of water often causes the seed to rot.

Free oxygen as contained in the air, is likewise essential. Saussure demonstrated by experiment that proper germination is impossible in its absence, and cannot proceed in an atmosphere of other gases. The chemical activity of oxygen appears to be the means of exciting the growth of the embryo.

It has been taught *that light is prejudicial* to germination, and that therefore seeds must be covered. (Johnston's Lectures on Ag. Chem. and Geology, 2d Eng. Ed. pp. 226 and 227.) When, however, we consider that nature does not bury seeds, but scatters them on the surface of the ground of forest and prairie, where they are at the most half covered and by no means removed from the light, we cannot accept such a doctrine. The warm and moist forests of tropical regions, which, though shaded are by no means dark, are covered with sprouting seeds. The gardener knows that the seeds of heath, calceolarias and some other ornamental plants germinate best when uncovered, and the seeds of common agricultural plants will sprout when placed on moist sand or sawdust, with apparently no less readiness than when buried out of sight.

The time required for germination varies exceedingly according to the kind of seed. As ordinarily observed, the fresh seeds of the willow begin to sprout within twelve hours after falling to the ground. Those of clover, wheat and other grains, germinate in three to five days. The fruits of the walnut, pine and larch, lie four to six weeks before sprouting, while those of some species of ash, beech and maple, are said not to germinate before the expiration of one and a half or two years.

The starchy and thin-skinned seeds quicken most readily. The oily seeds are in general more slow; while such as are situated within thick and horny envelopes, require the longest periods to excite growth. The time necessary for germination depends naturally upon the favorableness of other conditions. Cold and drouth delay the process, when they do not check it altogether. Seeds that are buried deeply in the soil may remain for years, preserving but not manifesting their vitality, because they are either too dry, too cold, or have not sufficient access to oxygen to set the germ in motion.

To speak with precision, we should distinguish the time from planting the dry seed to the commencement of germination, which is marked by the rootlet becoming visible, and the period that elapses until the process is complete, i. e., when the stores of the mother-seed are exhausted, and the young plant is entirely thrown upon its own resources. At 41° F., in the recent experiments of Haberlandt, the rootlets issued after four days in the case of rye, and in five to seven days in that of other grains and clover. The sugar beet, however, lay at this temperature 22 days before beginning to sprout.

At 51° the time was shortened about one-half, in case of the seeds just mentioned. Maize required eleven, the kidney bean eight, and tobacco thirty-one days at this temperature.

At 65° the grains, clover, peas and flax, began to sprout in one to two days; maize, beans and sugar beet in three days, and tobacco in six days.

The time of completion varies with the temperature much more than that of beginning. It is, for example, accoring to Sachs, at 41° to 55° for wheat and barley, 40 to 45 days; at 95° to 100° for the same, 10 to 12 days.

At a given temperature, small seeds complete germination much sooner than large ones. Thus at 55° to 60° the process is finished with beans in 30 to 40 days; with maize, in 30 to 35 days; with wheat, in 20 to 25 days; with clover, 8 to 10 days.

These differences are simply due to the fact that the smaller seeds have smaller stores of nutriment for the young plant, and are therefore more quickly exhausted.

An important deduction for practice, from the facts above set forth, is, that general rules with regard to the depth to which seeds should be sown, must not be laid down too rigidly, but circumstances must be allowed to alter cases.

While it is the almost universal result of experience in temperate regions, that agricultural seeds germinate most surely when sown at a depth not exceeding 1 to 3 inches, there are circumstances under which a widely different practice is admissible or even essential. In the light and porous soil of the gardens of New-Haven, peas may be sown six to eight inches deep without detriment, and are thereby secured from the ravages of the domestic pigeon. The Moqui Indians, dwelling upon the table lands of the higher Colorado, deposit the seeds of maize 12 to 14 inches below the surface. Thus sown, the plant thrives, while if treated according to the plan usual in the United States and Europe, it might never appear above ground. The reasons for such a procedure are the following: The country is without rain and almost without dew. In summer the sandy soil is continuously parched by the sun, at a temperature often exceeding 100° degrees in the shade. It is only at the depth of a foot or more that the seed finds the moisture needful for its growth—moisture furnished by the melting of the winter snows.*

Yale College, New-Haven, Ct., Feb. 18.

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[For the Country Gentleman and Cultivator.]

Potatoes--Plant Early, Plant Deep and Dig Late.

Editors of Co. Gent.—I have observed of late several articles in the Co. Gent., recommending early digging of potatoes attacked with disease.

Now my *observation* and *experience* have led me to an entirely different practice. For several years after the appearance of the potato disease in this country early digging was recommended, which plan I practiced repeatedly, sometimes spreading my potatoes on the bottom of a *dry* cellar, and sometimes burying them in pits, always with great and sometimes total loss, not to mention the disagreeable labor of overhauling them, in those seasons when the disease was prevalent.

Assuming that the disease is *atmospherical*, *epidemic* and *contagious*, I changed my practice—which for the last fifteen years has been perfectly satisfactory—leaving my potatoes in the ground as late in the fall as would be safe on account of frost—all potatoes then *sound*, keeping good both in the cellar and in pits.

Now for the "reason for the faith that is in me." For several years I have observed that those tubers that were deepest in the ground, and the hills the least conical or elevated above the surface, were invariably the freest from disease. Hence I inferred they were safer in the ground than out, being less exposed to heat, light, and atmosphere, and contagion from contact.

Your correspondent J. L. R., says that he dug his potatoes the 12th of Sept., and had only twelve bushels of sound potatoes, and thinks had he dug them a month earlier he might have had 40; and so he might, and very likely would have had them to overhaul and a portion to throw away, and the balance being so much exposed to light and air as to render them neither healthy nor palatable. Many years ago I had an acre of potatoes which in the month of August were attacked with disease, and to *save them*, I dug them and spread the apparently sound ones on my cellar bottom, which was dry, giving them what air I could. But in a very few days they commenced fermenting,—"sweating at every pore,"—and the result was, after sundry sortings and overhaulings, I had them all to throw away. I should have said however, that a few hills were left undug until late in the fall, from which I obtained a basket of sound potatoes worth more than all those dug in August, not to mention the disagreeable labor attending the removal to and from the cellar.

And now after more than twenty years of experience and experimenting on the potato rot, I have settled on this practice—plant early, plant deep, and dig as late as possible, avoiding frost, that is, freezing of tubers, and you will get the most sound potatoes with the least labor.

Adrian, Mich., Feb. 16, 1862. B. J. HARVEY.

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Good Pigs.—Mr. Wm. P. Giles of Skaneateles, recently killed four hogs that weighed 1,200 pounds, at 8 months and 17 days, one of which weighed when dressed 351¼ pounds. They were fed on milk. I consider ground oats a superior feed for hogs. B.

A BUREAU OF AGRICULTURE.

Hon. Owen Lovejoy sends us the Report of the Congressional Committee on Agriculture, of which he is chairman, submitted in the House of Representatives, Feb. 11th, in favor of the "establishment of an Agricultural Department or Bureau."

This action was specially recommended in President Lincoln's last annual Message; and the Secretary of the Interior, in his report then presented, also urged "the establishment of a bureau of agriculture and statistics, the need whereof," he remarks, "is not only realized by the heads of departments, but is felt by every intelligent legislator. * * One of the objects contemplated by Congress in the appropriations for the promotion of agriculture was the 'collection of agricultural statistics.' * * Annual reports made under the direction of such a bureau, *setting forth the condition of our agriculture, manufactures, and commerce*, with well digested statements relative to similar facts in foreign countries, which the present rapid intercommunication enables us to obtain often in advance of their publication abroad, would prove the most valuable repertories of interesting and important information, the absence of which often occasions incalculable loss to the material interests of the country."

The Report of the Committee on Agriculture seconds these suggestions, and argues the importance of the Bureau proposed, very fairly, but not with as much force as we should have been glad to see the question discussed, nor apparently with as clear an idea of the whole scope and uses of such a department as was entertained by the Secretary himself.

Thus, in answer to the supposed objection, "Why not have a minister of commerce, of manufactures, as well as a minister of agriculture?" it is justly answered that "commercial and manufacturing interests, being locally limited and centralized, can easily combine and make themselves felt in the halls of legislation, and in the executive departments of the government," while farmers are lacking in similar combinations to press their interests; and thus "New-York and Lowell have often more immediate influence in directing and moulding national legislation than all the farming interests in the country." But the committee might also, and still more forcibly as it seems to us, have urged the importance of such a bureau, from the benefits it will render to our commerce and manufactures, quite as much as from those which our agriculture may expect from its establishment. For its true design should be to include—as a department of "*Agriculture* and *Statistics*"—the whole productive capacities of the country in every department of industry. It is this which the Report of the Secretary of the Interior, as above quoted and italicized by us, distinctly advocates; and, in such a bureau, Agriculture justly takes the first and most prominent place, because, upon *its* condition, and upon the facts revealed by its statistics, so large a share of both our commercial and manufacturing prosperity is mainly dependent. The interests of manufacturers, of merchants, and of farmers, are, we fully believe, in the long run far more likely to be harmonious and co-incident with each other, than they are to clash; and it thus results, not only that such a bureau, properly managed, is of itself partially a bureau of commerce and manufactures, but also that where it *is* specially promotive of the interests of Agriculture, it also exerts a secondary effect to the advantage of those other pursuits which can never be most prosperous except in the prosperity of the Farmer, and which depend upon him entirely for the resources of their subsistence, and, very largely, for the purchase of their goods.

A Department of "Agriculture and Statistics," we do need. It should receive, condense and circulate the Statistics now obtained in States which already collect them, and secure their collection in other States. It should be an active, living, *working* department. It should deal with the great facts of constant practice; and leave theoretical investigations mainly to those better fitted to carry them on wisely and well. It should not be turned into a hospital for rejected office-seekers in other departments; nor into a seed and flower establishment for the supply of what any seedsman or florist will be glad to sell us; nor into a publication office of collated extracts and re-hashed essays, presenting nothing that has not been printed before in other forms, and nowhere serving to carry forward one step the real agricultural knowledge of the day. If our Government proposes in earnest thus to extend its helping hand to our industrial interests, we trust the new bureau will be committed to hands not notoriously incompetent; that it will be raised above the level of petty political influences; that it will publish reports to which we may turn with a reasonable hope of eliciting here and there a new fact, or getting now and then some ray of light, however feeble, in channels before obscure. If space permitted we should be glad to treat this subject at greater length;—we have avoided it hitherto, in despair that what any true friend of Agriculture might say would receive even the most cursory attention, and now we dare scarcely entertain much hope that the new bureau, if indeed it be created, will be placed upon such a basis as to secure the confidence of the reasoning and thinking Farmers of the country.

TRIMMING BUCKTHORN HEDGES.

Messrs. Editors—I take the liberty to ask your advice in trimming a *Buckthorn hedge* that surrounds my fruit-garden. It has been set nine years; my custom has been to trim it once a year, the last of July or first of August. The first few years I trimmed it square; but by the regular weekly visits of the Country Gentleman in my family, I have learned, among many other things, a much better way, and now it is a fair specimen of the pyramid form, nearly eight feet high. Now what I want to know is, how shall I trim it and keep the present hight, and preserve its beauty? I find the leaves are nearly all on the outside, and if I cut close to the previous cutting, I rob my "pet" of all its beauty—*the leaves.*" I don't want it higher, as it is difficult to trim now. "*What is to be done?*" Willis P. Sargent. *Amesbury, Mass.*

The buckthorn, although a very hardy tree, is one of those which will not grow well in the shade, and for this reason its interior branches are nearly destitute of foliage. If very evenly and frequently sheared, a dense stratum of foliage is formed at the exterior of the hedge, preventing the growth of any leaves inside. To avoid this result, do not shear frequently, (and never while the hedge is growing or in leaf,) but cut the surface with a knife by *thinning-in*—that is by cutting out for a short distance inwards one-half or two-thirds of all the ends of the branches—going further in, and thinning out more severely according to the necessities of the case.. This must be done early in spring, and never when the leaves are on.

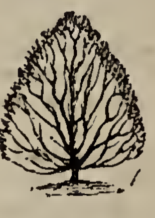
Fig. 1.

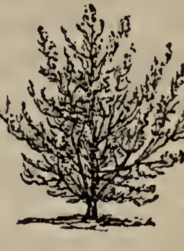
Fig. 2.

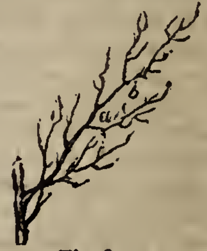

Fig. 3.

Fig. 1 shows the section of a hedge which has been repeatedly sheared at the outside, all the interior branches being bare. Fig. 2 represents the same shortened or thinned back in the way here intended, presenting a more irregular or uneven surface, and admitting the light to the interior. Fig. 3 shows more particularly how this process is performed, the cut back being made at a fork *b*, or still shorter at *a;* thus leaving no stumps.

The Pecuniary Interests of England and France.

Aside from the moral point of view, from which any question may be judged, we all know that there is generally a pecuniary argument somewhere involved, and that, in the present fallen condition of humanity, the latter is likely to be considered quite as forcible in most cases as the former. But, beyond the obligations of morals, and the interests of money-getting, there are the impulses of various passions, sometimes blameworthy, and perhaps sometimes laudable, which often blind us entirely both as to duty and expediency. During our present national difficulties other nations have not been backward in representing us as thus blinded by passion; and without wishing to intimate that there are resentments or jealousies of any kind which could have interfered the most remotely with the clearness of *their* vision, it still seems to us that their position towards the United States throughout this sad national conflict of ours, has scarcely been such as real friendliness to us, or a wise regard for their own highest commercial and manufacturing prosperity, would have dictated to them.

On the score of friendliness, however, we have nothing to say, since, with regard to it and its obligations, every man or nation expects to be his own judge. It is the pecuniary relations which our present difficulties bear towards England and France, to which we wish to refer very briefly. These two nations have long supplied us with manufactures of necessity or luxury, in vast quantities, for which during the past year our markets have been almost wholly closed, while, at the same time that their exporters are thus shut off from business, their manufacturers and artisans—both their capital and their labor—have been lying comparatively idle for lack of cotton, as well as lack of trade.

Now we cannot but think, that if the two governments alluded to, when first approached, probably more than a year ago, by agents of the "Confederacy" then in process of incubation,—had clearly seen their own interests, and distinctly and promptly affirmed, that, as supporters of established institutions, as leaders in the arts of peace, as friends of humanity and civilization,—they could in no respect aid nor countenance a revolutionary movement in the Southern States—we cannot but think, that after such an announcement had been made, our peace here would never have been infringed, and that their sales to us of goods, and purchases from us of cotton, would have consequently continued to go on just as in other years. Instead of this, there is nothing to show that the hopes of Southern recognition were not encouraged in Europe, and their efforts in promoting revolution and war, aided there, or at least not at all impeded. And, hardly had the struggle opened, when a so-called "neutrality" was declared,—placing a few discontented leaders on the same footing as the government of an allied nation; fostering the duration of a strife, in the course of which England and France had everything to lose, with very uncertain gains to hope for after its conclusion,—a strife which had its origin in the supposed power of Cotton to compel the homage of the world, and which has been prolonged thus far, only because it has taken so long to convince other nations that a scarcity of this material is not, after all, the worst of national evils.

Some one has lately been arguing in England that it would be cheaper for the nation to support its idle factory-laborers, than to undertake a foreign war of unknown length and magnitude; and Mr. Bright, in an address lately delivered before the Birmingham Chamber of Commerce, aptly remarks that "if cotton be now a shilling a pound, it could not be got through war at less than five shillings." Mr. Caird, too, in a speech which is spoken of as very able in our English exchanges, argues that "if we [England] break the blockade of the Southern ports, to obtain the cotton which in a very short time we shall receive in abundance from India, we shall have to fight the United States, from which we now derive our chief supply of grain, and shall thus raise the price of wheat 20s. a qr. The result, according to Mr. Caird, would be that, instead of having, as we now have, 2,000,000 of people on 'short time,' we should see 30,000,000 in Great Britain on 'short commons,' and 36,000,000 in France in the same condition, owing to the non-arrival of breadstuffs from Northern America."

This is not the interested view of a tradesman, but the elevated argument of one who looks beyond a temporary lack of cotton to the consequences of paying too high a price to get it. And now that, as we all believe and trust, the zenith of this up-rising has passed by, such calculations as those of Mr. Caird cannot help being of still greater weight in Europe. Surely no statesman there can have supposed that a great nation like the United States would be the quiet witness of its own dismemberment and dissolution! We desire no better authority than the commercial history of the past twelve months, to prove that the interests of our government at the beginning were identical with those of England and France, and are so still; and that the cause of order and peace and human welfare, was then, and yet remains, coincident with both.

Composting Muck with Stable Manure.

I have been experimenting somewhat this winter in composting, and ask both your advice and opinion. Have been forming a pile in my yard, composed of a layer of good quality peaty muck, fresh dug, of eight to ten inches thick, and then a layer of good strong, fresh, unleached stable manure, made from both horses and cattle, rather coarse, perhaps, and which would need in itself to become somewhat more decomposed before using, of 6 to 8 inches thick. I have added alternate layers of this until I have a mass 40 feet long, 12 feet wide, and 6 feet high.

I shall need to use it about the 20th of May, and propose about the first or middle of April to fork it all over carefully, and see that the whole mass is thoroughly incorporated together. And what do you think of this? Will it prove labor lost, and come out in May simply muck and manure, or will the pile heat and decompose and become assimilated so as to prove advantageous? What more than already named can I do to benefit it? Will the addition of lime or gypsum at the time of forking over be useful? I wish to use it on a clay loam.

Salisbury, Conn. W. J. PETTEE.

We do not think much fermentation will take place, but the layers will slowly decompose and make, when well mixed together, a good compost. Leave it untouched as long as convenient, and then intermix the whole. By cutting in a few feet it will be seen whether decomposition has been enough. Forking it over would be quite a task; if the ends could be sloped, and a yoke of oxen passed up on the heap, they would do the work very thoroughly and rapidly by means of a plow and harrow; shovelling off the mellow mixed stratum into carts below, and rerepeating the process. Or, if the pile is too soft for oxen, a portion may be cut off and thrown at the side, to be pulverized by the harrow. In forming such heaps the labor of mixing is saved by making each stratum as thin as practicable. The lime and gypsum may be useful, but would be equally so applied in any other way to the soil.

The Country Gentleman—My voice is but an echo of what seems to be a general opinion—the Co. Gent. is *indispensable* to the American farmer—highly practical in its teachings, full of useful and entertaining matter on every subject of interest to the farmer. *Two Dollars* is indeed a small consideration for 52 visits of the Co. Gent. I have had the pleasure of bidding him a weekly welcome since his "first appearance before the American people," and none of my daily, weekly or monthly visitors, have a more generous welcome than he N. G. M.

[For the Country Gentleman and Cultivator.]

Manufacture of Sugar from the Sorghum.

At a meeting of the Philadelphia Society for Promoting Agriculture on the 5th March, Mr. Sidney G. Fisher, the corresponding secretary, offered the following statement from Milton Conard, of West Grove, Chester county, Pa., in relation to the cultivation of the sorgho-sucre, and the manufacture of syrup and sugar:

Having on two former occasions presented to your society the result of some experiments made by me in the cultivation of the sorgho-sucre, or Chinese sugar cane, which were well received by the members, I am induced to think that my further experience on the same subject may be of some interest to them and to farmers generally.

The circumstances of the present time offer great inducements to the growth of this plant, which, if it was profitable before the war, must become more profitable hereafter, because the needs of the government will cause higher taxes to be laid on foreign sugar and syrup.

The experience of the past four or five years has established three points:

1. That it costs but little more to grow the sorgho-sucre than to grow a crop of Indian corn.
2. That from it can be manufactured sugar and syrup of excellent quality.
3. That the profit per acre is twice as large as that of any grain crop.

These points are proved by the following facts from my own experience and that of my neighbors. I have for four years past, on three to four acres, annually, in regular field culture, from land such as had produced an average crop of forty-five bushels of corn per acre, derived an average yield of 175 gallons syrup. The average wholesale price at which it sold was forty-five cents per gallon. The price charged per gallon for manufacturing was fifteen cents. The smallest yield 140 gallons, the greatest 218 gallons per acre.

My neighbors have generally put in a smaller quantity of land, and have in many instances, by more careful culture than I have given, obtained a much greater yield.

If we compare the crops of cane and corn, as stated above, at the average prices at which both were sold in our neighborhood, the account will stand thus:

175 gallons syrup at 45 cents,	$78.75
Cost of manufacture, at 15 cents,	26.25
Leaving a net return per acre,	$52.50
Value of 45 bushels corn, at 50 cents,	22.50
Balance in favor of cane,	$30.00

The aggregate of the annual product of syrup in this and the adjoining townships, for three years past, has ranged from 150 to 250 hhds., and promises greatly to exceed these maximum figures the coming season.

A chief difficulty in the extension of the culture of the cane heretofore has been the lack of suitable apparatus for manufacturing the syrup and sugar. The appliances for evaporating the juice having been variously constructed according to the ingenuity of operators, the results have been frequent failures, particularly in the quality of the article. These obstacles seem now to be fairly overcome by the introduction of "Cook's patent portable Evaporator," together with important improvements in mills, rendering them more efficient as well as more durable.

The samples of sugar and syrup herewith sent were made on Cook's Evaporator, without previous defecation, from cane kept until the last of November, and are in no respect superior to what may be made from any *mature* cane. I have already shown that the culture of the sorgho may be made profitable to the farmer. A word as to the profits of the manufacturer. It would probably be for the interest of both that the operations of each should be carried on separately. The success of Cook's apparatus for reducing the juice to a beautiful and pleasant syrup, and the ease with which the syrup granulates, forming sugar of a superior quality, renders the manufacture a safe investment if judiciously managed.

With a mill costing at shop,		$75.00
And No. 4 evaporator.		65.00
Freight and Fixing up,		20.00
Apparatus costing,		$160.00
Can be made per day 75 gallons syrup, at say 15 cents,		11.25
At a cost of five-eighths cord of wood at $4,	$2.50	
Two and half men at $1,	2.50	
Two horses, at 50 cents,	1.00	
		$6.00

Which leaves a margin for "sinking fund" of $5.25 per day.

In our latitude the work may be continued successfully from the middle of September until the last of November. I offer this statement to the society as an inducement to farmers, and others, to embark in the culture and manufacture of the sorgho-sucre, convinced that the interests of agriculture would be thus promoted, and another element added to the commercial independence of our country.

I have necessarily, for sake of brevity, avoided details of the method of culture, and of the manufacture, but may here add that any inquiries on these points, so far as my information extends, will be cheerfully responded to.

West Grove, Chester Co., Pa. MILTON CONARD.

[For the Country Gentleman and Cultivator.]

APPLICATION OF MANURE.

There seems to be a good deal of diversity of sentiment, in regard to the best time of the year to apply manures. Such earnest advocacy of opposite opinions, many of which are the results of experience, shows that the time of the application of manure is not of essential importance. I think the vital point is, not whether the manure should be put on in the spring, fall or winter, but to be sure and put it on.

I have seen great effect from that which was put on in the spring, even if it had large quantities of straw in it; and certainly it is good to put on about the first of September, either on wheat or meadows. The plan of spreading manure on grass land in the fall, which was to be plowed for corn the next season, I have tried with marked success, and I do not doubt but it is well, when convenient to draw it out in winter. Perhaps it may be the true system, to give a dressing to cold grass land in the spring, especially if the manure has in it a good deal of grass seed. Very coarse manure, even clear straw, is beneficial, applied at this time. About the first of April is the best time, as it gets washed into the soil by the early rains, and the grass seeds germinate readily. But we do not miss much, if this is applied early in the fall, unless some of it has been allowed to waste in the summer. On dry and cultivated land it seems quite as well to make the application in the fall. On wheat of course it is.

I think that some are misled in their estimate of the superior value of manure which has been lying through the summer, by its being concentrated, so that what is a load in the fall, was two or three loads in the spring, and of course the same bulk or weight is more valuable. The value of two or three is condensed into one.

There has been a change in the practice of some farmers here, and I judge, from reading the discussions on the subject in your paper, of many in other parts of the country, which is to apply the manure more directly to grass, than as formerly to grain. The immediate result of this practice is a diminished crop of grain, and perhaps a diminished income from the farm a year or two, but the result in a few years, is the increased fertility of the soil, and consequently an increased product of grain also. This change in the practice of farmers here has been brought about partly by their estimate of the value of the grass crop, by many, as almost equal to the grain crop. The relative importance of grain and grass in a system of farming, is certainly changed in favor of the latter, and the most important advantage of this change is the improvement in the fertility of the soil.

Therefore the manure should be applied to the benefit of the grass chiefly. Those who raise wheat will apply their manure at the time of sowing, and near the surface, to the very highest advantage of the succeeding grass. Where corn is a principal crop, the manure should be put on, if possible, at the seeding of the land, in anticipation of the corn crop. A heavy growth of grass, fed off by stock, is the best preparation for corn.

Amenia, Duchess Co. N. REED.

[For the Country Gentleman and Cultivator.]

WHAT THE ILLINOIS "COFFEE" IS.

Thanks to the gentleman who has introduced this article, GEO. R. HUFFMAN of Effingham, Illinois, I have received a few seeds of this plant, which he has grown for two years past, having received it as the coffee of Australia. An examination of the seed shows it to be a vetch —natural order *Vicia*, genus Cicer, from the Greek word kikys, force or strength. Hence the Cicerons had their name from the pulse or cicer which they ate, as the Pisons, from the pea, the Lentuli from the lentils.

This plant belongs to the Lin. system Diadelphia Diandria. It is an annual herb. The species to which these seeds belong is the *Cicer arietinum*, the chick pea, a native of Syria, Egypt, Italy, the Levant, found among the corn or grain. The seed has a projecting cheek, hence its resemblance to a ram's head, which gives the name. The seeds are eatable, raw or boiled, and constitute a considerable part of the food of those countries. It flowers in June and ripens in August; is grown in drills or sown broadcast.

Loudon, from whom most of my information is derived, describes three other species. *C. songarium*, with larger seeds, in Songaria and Persia. *C. soloniense*, in Europe. *C. nummunifolia*, or Moneywort leaved Cicer, is prostrate.

The *C. arietinum* has an acid exudation from its glands, which consists of oxalic acid. I find no reference to its use as coffee, but suppose it might answer as well as any other pea for that purpose. JNO. A. WARDER.

Cincinnati, March 1, 1862.

More about the Illinois Coffee.

MESSRS. LUTHER TUCKER & SON—My attention having been attracted to the raising of coffee in Illinois, by G. R. Huffman of Effingham county, by different articles in several papers—among the rest your correspondent at Wilmington, Ill., on page 145, vol. 19th—I was induced to try the coffee raising, and got from Mr. Mr. G. R. Huffman 50 seed of his coffee, with directions for cultivation. He says—plant in good corn land in drills, one in a place, and cultivate clean as corn, and thresh as beans when ripe. Now if I am not deceived, instead of it being identical with Rio coffee, as all the articles I noticed, stated, it is nothing more than the Garbanzo or Spanish Chick pea, or Coffee pea, which you speak of in vol. 10, p. 97, Co. GENT. I also enclose you two seed which I got from Mr. Huffman at the cost of $1 for 50 seed. Now if you think I am correct in my conclusions, you will please let us hear from you in the Co. GENT. D. J. WILLIAMS, JR.

Vine Hill, Versailles, Ky.

Our correspondent is not deceived. Mr. Huffman's Illinois coffee is nothing more nor less than the Chick pea —*Cicer arietinum*, as described by Dr. WARDER in the Co. GENT. of March 13, page 177. This variety of the vetch, though it has, according to Dr. DARLINGTON, been familiarly known throughout the civilised world for centuries, has several times of late years been introduced as something new and valuable. Lynch's Expedition to the Dead Sea brought it home under the name of "Hamoos Pea"—and in 1856 or 7, it was sent out from the Patent Office under its Spanish name, "Garbanzo." Several persons who tried it at that time, reported it as worthless.

CORN FOR SOILING.

EDS. CO. GENT.—Having had twenty years experience in the cultivation of corn for soiling for cattle, a few remarks on my success may be interesting to the readers of your valuable paper.

From experience I find the best chance for a full crop of fodder is on land that has been planted to corn the previous year, which, in the regular course of cropping, would come in with oats in the spring, and to be sowed with wheat in the fall. I select that portion of the field the most convenient to my pasture, for my corn, which receives a good dressing of barn-yard manure in April, and is plowed in to the depth of four or five inches, the ground then well harrowed and rolled down. The seed is drilled in about the first of May with a wheat-drill, at the rate of four bushels to the acre, and again rolled down, which is all the labor in putting in the crop, and needs no further cultivation.

Now my object is to have the corn start early, and make a good growth by the first of July, at which time the pasture is dry and short, and we stand in need of a change for our cattle to keep up the supply of milk, which we cannot have for a few weeks on the mowed lands; and as the cattle have the flies to contend with at that time, the corn is the best substance I have ever tried to keep up the supply of milk.

I commence to feed the corn about the 1st of July, when it is from twenty inches to two feet high, and continue to feed what the cattle will eat clean, twice a day, until about the middle of August, at which time we commonly have a full supply of pasture again.

One acre to corn is sufficient in a good season for 20 head of cattle, and I have received the greatest benefit from its use before the tassel shoots out, as the leaves and stalks are the most nourishing at that time.

I have frequently had from 15 to 20 tons of green fodder to the acre, and sometimes have had a surplus, which I have tried to cure for winter use with but poor success; as I wanted the ground cleared by the 20th of August to prepare it for the wheat crop, I had to take the corn off before it was ripe enough to cure for winter use.

By putting the corn on the land which you intend to seed with wheat, you can have the land in readiness to sow at the same time as that cultivated with oats, and receive the full benefit of the manure that was put on the corn, as only a small portion is exhausted by the corn, and the land will produce a heavy crop of wheat without additional manure. A BUCKS COUNTY FARMER.

A CONVENIENT SCALDING TUB.

Having made, on one of the many rainy days of the past summer, a new fashioned scalding tub or rather box, for scalding hogs, which gives good satisfaction, I will briefly describe it, believing that it may be of service to many of your readers. It consists of a box, 24 inches deep, 30 inches wide and 4 feet 6 inches long. One end is put in slanting at an angle of 45 degrees.

In the slanting end put five hard wood rollers, 1½ inches in diameter. These rollers are held in their places by two hard wood sticks two inches square, securely fastened to the sides of the box. The rollers should have considerable play so as to turn easily. I made my box of 1¼ inch pine.

The advantages of this box over the round tub I find to be three. It is much cheaper, it requires much less water, and is labor saving. One man can scald a 300 lb. hog alone, with as little hard lifting as two can in the old fashioned tub.

Of course it should be made *tight* and *strong*.

ST. LAWRENCE.

[For the Country Gentleman and Cultivator.]

April---Suggestions for the Month.

" O, month that giveth April days,
So pleasant unto me,
Among the poet's sweetest lays,
Is ever one for thee.
And flowers in soil more verdant nurst,
That months to come may bring,
Will never charm me like the first
That wreath the brow of Spring."

Edmond.

The cheering and enlivening influences of spring have again returned. Dreary winter has departed. Old Earth has laid off her mantle of gloom and snowy whiteness, and will soon array herself in all her gorgeous beauty, and fan our brows with gentle zephyrs laden with the perfumes of roses, and cheer our hearts with the music of the groves.

In this latitude, farmers, in most localities, will commence some of the operations of the field in the month of April; and sometimes the weather is so favorable that they are able to plow and sow their spring grain, and to commence plowing for Indian corn; and some seasons the spring is so unfavorable—with so much wet and cold weather—that April glides away before a handful of grain can be put in the soil.

The plow and the harrow, the axe, pick and spade are the appropriate emblems of the month of April. The former must be used in pleasant weather only, while the latter may be used at any time.

Don't Commence Plowing too Soon.

By too soon, we mean before the soil is in a proper condition to turn up mellow and lively. Ground should always be allowed to *settle* after it has been frozen, before it is plowed.

The soil is rendered lighter and more porous by freezing and thawing; and after it has been frozen and thawed it settles back to its original compactness. Therefore, if it be plowed before it has settled, it will settle *after* plowing, and in a short period of time will be as compact as if it had not been plowed at all. But let it be plowed or spaded after it has settled to its former compactness, and it will remain mellow and friable for a long time, unless it is excessively wet.

Every farmer should make some estimate of his plowing and sowing, in order to know how many days will be required to complete this branch of business; and then, if the weather is unfavorable and the soil too wet, plowing may be delayed sometimes for a longer time, or until the soil is in a proper condition to be plowed and harrowed.

These considerations are of far more importance where clay predominates in the soil, than where the soil is sandy or loamy.

Hardening Teams.

Horses and oxen also, that have labored but little during the winter, may be as strong for a short time as those that have worked nearly every day; but their strength soon fails when they are hitched to the plow. Plowing is a branch of business that tries the strength of a team. There is "no let up"—no relief in the drawing—as there is when they are hauling a load on wheels, or on a sleigh. It is one constant stretch of traces and exercise of one set of muscles, and therefore, they soon become very tired and stiff and sore.

And so it is with men who have labored but little during the winter; when they commence hard labor in the spring, they soon feel very much fatigued and sore, after laboring only a day or so.

My own practice with respect to hardening teams and men too, has been to plow only half a day's work at first, during the day. For example, let a team plow two or three hours in the forenoon, and about the same time in the afternoon, and allow them to stop at each end, say thirty or sixty seconds, if the rounds are long. If they plow half an acre on the first day, it is all that they should be allowed to plow. After they have become hardened to it, they will plow from one to two acres with more ease and less fatigue than they will even one-third of an acre, when they first commence.

So with workmen. Let them work half a day at some light work, when they have a job of heavy work on hand. For example, if a man has been spading and shoveling for half a day, let him haul stone or rails, or make fence the next half day, until they have become well hardened to labor.

Harden the Necks of your Teams.

Some horses have a very tender skin, and the harness will sometimes gall them cruelly, in defiance of all means to prevent it. But, many times, the *true* cause is attributable to a bad collar, bad harness, or to a good harness improperly fitted to the animal. A yoke of bows that do not fit the necks of oxen well, will often gall them, and unfit them for labor, when if these things were as they ought to be, they would work with far more ease, and their skin would not be galled.

When a harness or yoke of bows do not fit properly, and their skin is liable to be galled, bathe those parts before they are galled with cold water, until the outside skin appears quite soft, and then bathe those parts with a strong decoction of white oak bark. Let this be done every day, and the skin will soon become much harder and tougher than it usually is. A little care in *preventing* an ill, is far better than much labor and skill in *curing* it, or in endeavoring to obviate its injurious effects.

The Way to Harness a Horse.

You may laugh gentle reader, as heartily as you please at the idea brought out in this caption. But how many men that are accustomed to use horses from year to year, can harness a horse *correctly*? Not one in ten! True, they may get a harness *on* the horse, and it may fit *well*; and it *may* fit like father's boots on his little son eight years of age. There is more science after all in harnessing a horse *correctly*, than we are apt to think of. Let us mention the principal and important points.

The collar is the *first* thing of importance. That large thing that will admit a man's arm between it and the neck of the horse, is very unfit for a horse to work in. The collar should fit as neatly and closely to the neck, as a pair of boots that fit well. Then if it is soft and supple as it should be, it will seldom gall the skin, if the *hames* is properly made and correctly adjusted.

The hames should fit the collar well, and should not be too far apart at the top, as they often are. The staples which hold the side straps and traces, are almost always attached *too far up* from the lower ends. A horse cannot draw well, when the traces are attached near the top of his neck. If a horse is apt to gall near the top of his neck, take out the staples and put them lower in the hames.

If the back bands are just right for a wagon, they will be too short when plowing, and will gall the backs of the team. For this reason, some horses always have a sore back as soon as they commence plowing. Let the hip or "lazy straps" be adjusted of the proper length, lest they gall the rumps if too short, and lift the plow out when it should run in.

S. Edwards Todd.

PRESERVING TIMBER.

We observe in some of the papers a notice of Cullen's patent composition for this purpose, to be applied especially to railway timber. It consists of coal tar with one-twelfth powdered charcoal and quicklime. We have no doubt this is a good application, but the only desirable object in adding the charcoal and lime, appears to be to make it *patent*. It is even possible that coal tar would be better alone, as it would be more liquid, (especially if as warm as would be safe to heat it, and applied with a wire brush,) and would penetrate deeper into the pores of the wood. Where it does so penetrate, decay is nearly impossible—we have found that light wood, placed so as to be exceedingly exposed to rotting, has lasted twenty times as long when so treated. If it is necessary to make the tar thicker for any outside work, whiting, pulverized dry clay, or very fine sand, answers an excellent purpose, and perhaps makes as good a composition as Cullen's.

FARMERS' CLUBS OF ONONDAGA CO.

FARMERS' CONFERENCE.—A general conference of the Farmers' Clubs of this county is being held at the City Hall to-day. The object of the conference is to consult upon the subject of Agriculture, and the best means to advance the interests of that branch of industry.

The meeting was called to order by Mr. SQUIRE M. BROWN, who stated the objects of the conference. An organization was effected by calling Mr. LUKE WELLS of Otisco, to the Chair, and by appointing Mr. D. HIBBARD of Pompey, as Secretary. There was a good attendance of the members of the various Farmers' Clubs of the county, and of others interested in the objects of the meeting.

At twelve o'clock the meeting adjourned until half-past one, when Mr. L. H. TUCKER, of the COUNTRY GENTLEMAN, is to deliver an address.—*Syracuse Journal*, *March* 19.

At the meeting alluded to in the above extract, the following Farmers' Clubs were represented by the presence of many of their members, although the recent thaw had rendered the roads so bad that the number who came was not quite so large as might otherwise have been anticipated:

Farmers' Clubs.	President.	Secretary.
Skaneateles, - - -	Joab L. Clift, -	S. M. Brown.
Manlius and Pompey,	Nathan Seward,	Wm. M. Smith.
Clay, - - - - -	Mr. Schoolcraft,	C. C. Warner.
Otisco, - - - - -	Luke Wells, -	C. Niles.

The meeting was an interesting one, and can scarcely fail to bear good fruit in bringing the Farmers of Onondaga County into more frequent communication with one another, and in promoting the co-operation and efficiency of their respective Clubs. Another general meeting will be held in Autumn, and it is proposed to continue such conferences two or three times a year hereafter.

The object of the address was to review the various directions in which Farmers' Clubs here and in other countries, have been found subservient of good. Two of the various suggestions that were submitted, appeared to strike the meeting more forcibly than any of the others, if we may judge from the animated and interesting discussion which followed,—viz.: the Collection by each Club of the *Agricultural Statistics* of the Townships embraced in its organization, and the Establishment of *Market Fairs*, at such time or times during the year as might be found expedient.

We most sincerely hope that efforts to accomplish both these objects may be made, and may prove successful. We have recently said so much on the question of Agricultural Statistics that we do not care to enlarge upon it farther at this time. But upon that of *Market Fairs* may be added a single word :

1. Every farmer has, at more or less frequent occasions throughout the year, various products to sell, and various animals or articles to buy.

2. Instead of his spending day after day in running around the country to find what he wishes to purchase—instead of his accepting the offer of any sharp or irresponsible party who comes along, for what he has to sell, or transporting it a considerable distance with the risk both of not finding a sale and of making a bad one if he does sell—the institution of a Market Day simply has for its object *to bring buyers and sellers together* at some one central point, at the time which will be likely to accommodate the largest number of both.

This is the whole thing in a nut shell. Now why cannot our Onondaga friends profitably turn the general reunions of their several Farmers' Clubs, which have been already proposed,—into such "Fairs" or Market Days? Why is it not a good hint for similar Town Farmers' Clubs in other localities, both to follow the example of the Clubs of Onondaga in coming together for mutual consultation and discussion, but also to vie with them in introducing County Market days for all sorts of agricultural stock and produce, seeds, implements, &c. ? Manufacturers, local and from a distance, would soon take care to be represented; and buyers too would learn to be on hand, and would by degrees come to depend on the recurrence of these occasions for the selection of what they want, from the wider range afforded for choice.

But we have not room to argue the question of Market Fairs at length; and should drop the question for the present, to add that at the Meeting at Syracuse, beyond the incidental discussion of the foregoing and other questions, favorable reports were made by members of the Clubs above mentioned, as to the activity and prosperity of their several organizations. It was stated that there is also a thriving Club in operation in the town of Van Buren. The meeting evinced the existence of a cordial spirit of good feeling and brotherhood, as well as of improvement and enterprise on the part of the Farmers and Farmers' Clubs of Onondaga.

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[For the Country Gentleman and Cultivator.]

TOBACCO CULTURE.

Those who are about to enter upon the culture of tobacco should be prepared to find that it is not all profit and no work. It is estimated by those who have had a good deal of experience in it, that the labor required by an acre of tobacco is equal to six acres of corn, and much of it is of the severest and most disagreeable kind, and is generally called for when most needed for other crops of the farm. There is a saying here that tobacco requires the best piece of land, and all the manure, and all the labor, and all the shed-room of the farm, and adds no manure.

The product of this crop is sometimes very heavy, as much or more than two thousand pounds per acre, but it probably does not average over one thousand pounds. Of this there are two or three qualities, the second and third very much lower in price than the first. So that when tobacco is called 10, 12 or 15 cents a pound, the average price of the whole crop is much less.

Now let any one estimate the nett proceeds of six acres of corn, and compare it with the nett of one acre of tobacco; especially if the corn crop be allowed the same good land and thorough cultivation.

It is considered against the rules of good farming to put the manure on the best land, and the tendency of tobacco culture is to the neglect of other interests of the farm.

It is more allowable, in those districts of country, as in some places in New-England, where there is but a small proportion of the farm that can be cultivated, and that suitable for tobacco; where the principal part of the farm is given to pastures of necessity, and a few acres only of plain or intervale is subject to the plow. It may be the best the owner can do to get as much as possible from these few acres, let alone the rest.

But the farmer who has any extent of improvable land will find his chief interest in that style of farming which promotes the improvement of the whole. N. REED.

Duchess Co., Feb. 13, 1862.

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THE BROOKLYN HORTICULTURAL SOCIETY will hold their regular spring exhibition at the Academy of Music, Brooklyn, on the 23d, 24th, and 25th of April. It is expected this will be the best display ever made by this Society. Any information regarding it can be had of the Secretary, C. B. MILLER, No. 29, Broadway, N. Y.

OUR BEAN CROP---1861.

Eds. Co. Gent.—As there seems to be considerable inquiry in regard to white beans and their culture, perhaps an account of our last bean crop, its management, products, &c., may be of interest to your readers. We have planted beans more or less for the last seven years, and claim to know something of their culture—though we do not know it all yet—we learn something new every year, both from others and our own experience.

May 17th.—Finished plowing five acres of corn-stubble, in order to sow oats on the lower two acres. Intend to plant the upper part with white beans. Would not have plowed for the latter crop yet, but for the fact that the ground needed plowing up and down, rather than along the slope.

31st.—Harrowed and marked off bean-ground—rows two and one-half feet apart—with a common corn marker marked across the furrow. Planted in the same direction, or along the marks, with Wakefield's Hand Planter, about eighteen inches apart, six to eight beans per hill. Heretofore we have planted across the marks, but find that it leaves the hills irregular in the rows, one-half being on one side, and one-half on the other, as the planter goes and returns, which is inconvenient in cultivating and hoeing.

June 1st.—Finished planting the beans. Put in about a dozen rows of the China Red-eye—the balance being the medium white bean.

July 6th.—Cultivated the beans with a common shovel-tooth corn cultivator. Hoed some, also; very few weeds to be seen—we merely go along and level the dirt around and between the hills.

July 12th.—Have at odd spells got the beans all cultivated and half or more hoed—working them only while dry. The rest will have to go as they are, for haying and harvest are upon us.

Sept. 6th.—Beans fit to pull. Let the job to a German woman at $1 per acre.

We find the beans well podded and ripened very evenly. Wherever we find a green stalk, it is much better policy to let it stand than to gather it with the dry ones, as the unripe beans are sure to mould and color, injuring the market value of the others. The first day's pulling, shelled badly; we estimated the loss at $5 on the first half acre. The ground was very dry and warm—the day a warm one—after that we had some rain and cooler weather, and lost but few from shelling. In pulling they were laid in small bunches of four or five hills, and in two days of fair weather were fit to draw in. Some were wet by showers after pulling; these we turned with forks, and lost none from the rain, though at one time we feared half an acre of the best would be spoiled. When drawn they were spread about on the scaffold, and "over head," (over the barn floor,) about two feet thick, and thus dried perfectly, except a small place near the centre, where the dust and shell beans fell most thickly in pitching. Even here but a few stalks were seriously injured.

The imperfect and colored beans were the result in almost every case, of the lower end of the pods growing down into the soft dirt, which had been moved *towards* the hills in cultivating. We should have had a cultivator, (like that we used one year,) in which the outer tooth can be turned to throw the dirt from or against the hills, as you like, and in cultivating and hoeing beans, we should not raise the hill more than half an inch above the level of planting time. It is important to give clean cultivation. On a clean soil this is very easy, as, planted at the distance named above, the hills soon cover the entire surface. The crop when free from weeds will be at least three times as valuable as when overrun by them, and the condition of the soil for future crops is enough better to pay the cost of weeding.

Sept. 19th.—Finished drawing in the beans; a few days afterward sowed the ground to wheat, harrowing in about ten loads of fine manure per acre with the seed.

Sept. 21st.—Cleared up barn floor—threshing a few more beans—had 12 bushels. They were not quite dry enough to thrash easily or to turn out as bright as they will in the winter, and need sifting and picking over to come up to prime quality.

Dec. 11th.—Thrashed beans another day—now in capital order. The sheep take hold of the straw as though they loved it.

26th.—Sold 26 measured bushels at $1,87½ per 62 lbs. Weighed nearly 27 bushels—brought us in a little over $50.

Jan. 11th.—We have the balance of the beans thrashed; there are 55 bushels, which will weigh over a bushel more, making the whole crop (including 2 bushels China Red Eye) 84 bushels, 28 bushels per acre. We can now sell at $1.75 per bushel, which will make the crop worth $150, or $50 per acre, reserving some for seed and family use.

The cost of cultivating an acre of beans in the best manner, including the use of the land and *all* expenses, will not exceed $15. The crop on good soil, planted by the first of June, and carefully harvested, will not be less than 30 bushels per acre. (Ours would have been that, but for the fact that the Red Eye beans planted, were some six years old, and had been damaged by getting wet a year or two before, and the ground was not more than one quarter occupied.) So at 50 cents a bushel, (what we sold one crop for,) one gets pay for his work and capital. We have said nothing of the straw—it is worth half as much as the best hay for sheep feeding. We had rather have two tons of bean straw to feed in connection with three tons of hay, than to have four tons of hay, to feed alone.

Beans can be grown at a cost of $10 per acre—if planted on clover sod turned over immediately before planting, weeded by turning on sheep, and we have good weather for harvesting, so that it can be done without stacking.

You have spoken of their value for feeding to sheep and milch cows; for the latter mixed with corn or barley and ground. We have tried them, and value them highly. Pork has been fattened upon such a mixture at a very cheap rate. For sheep they need no grinding, but should be mixed with corn and oats to produce the best effect. Indeed, a mixture of grains is best for any animal, and a change of fodder is equally acceptable to their appetites. Albert. *Western New York.*

Loss of Weight in Hay and Corn.

Editors Country Gentleman—I have made an experiment as to the loss of weight in hay when put in the barn, and when taken out at this season. Some of my neighbors bought hay in July, and to accommodate the sellers, had it drawn at once to their carriage-houses, the price to be made in February. I told them they would lose by the operation, and in order to see what the loss was, I had a load weighed and put by itself in my barn on the 20th of July:

Weight, 20th July,..................	2,001
do. 18th February, ...	1,449
Loss............	552 or 27½ per cent.

The experiment was carefully made. I have a hay-scale on my farm—(in four years it has saved more than its cost)—20 feet from my barn door, and I do not believe five pounds of hay was lost. Hay is worth $15 a ton, so that bought in July cost $20.65.

The cob in a bushel of good corn in November weighs 19 lbs.; in May, 7½. Millers charge six cents per bushel for grinding corn, either shelled or in the ear; so if ground in the ear, when dry you pay 12 cents for the corn to make 56 lbs. of real feed instead of six. *Will it pay?* I think not.

I wish some of your cornstalk fodder disputants could see my cattle fed on them for two months. They would confess they are worth something. I have 20 head put in the stable on the 6th of December, and if not sold, will leave it for the first time in April. Warm, well ventilated stables, regular feeding, and good leaf bedding, with me saves fodder, keeps healthy cattle, and makes a manure pile. W. H. Denning. *Fishkill Landing.*

[For the Country Gentleman and Cultivator.]

FARMING IN MARYLAND.

Messrs. Editors—I have for some years read the Country Gentleman with great interest, but have been surprised to find that the products of your land, even in the great State of New-York, by all your enlightened farming, by no means excel those of my neighborhood, and I would really be sorry if I could not beat many of the statements in your paper. Besides we have in our neighborhood as good and pure Alderney, Devon and Hereford cattle; as pure South-Down sheep, as good Suffolk, Berkshire and Chester pigs, as can be found in the country. I have but a small farm of 118 acres, of which about 90 acres are in cultivation. I raise wheat, rye, corn, hay, considerable potatoes and other roots; also beans, peas, &c. I planted about six years ago, over 1500 fruit trees, where heretofore forest trees occupied most of the place. I have also a vineyard of about 5,000 grapevines which last year bore some grapes, but next year I expect to make a full crop. I also raise an abundance of strawberries, rasberries, currants, &c.

When I bought the land, about six years ago, about 50 acres of it was in wood-land. With a Pittsburgh Iron plow, I plowed deep from the start, two men going along with plow cutting the roots. I then spread 50 bushels of lime to the acre, and planted corn, which, well cultivated, always gave a good yield. Next year I followed with peach blow potatoes. After they were taken out the land was clean. The spring following I sowed oats and clover. The next year after I always had a good crop of clover, which I mowed once; the second crop, which generally is 12 inches high, I plow down in the fall, put 250 pounds bone dust, 2 bushels salt and 15 bushels unleached ashes on an acre, and sow wheat, or plant corn next spring. So far I have succeeded remarkably well with every crop; but I consider now that my land has done all it could without manure. But by this time I am well provided with the materials to keep up my land. I feed all my hay, corn fodder and root plants to my 14 head of cattle, 5 horses, and enough hogs to make about 4,000 lbs. of pork. I sell no straw, but use it all for litter. I have this season over 400 three-horse wagon loads good stable and butcher manure, and manure from over 400 chickens, which is all carefully taken care of, and mixed with muck and plaster; it goes into the hills of my corn.

I don't pasture, but feed my cattle in winter on good salted hay, cut when in blossom, good corn blades and tops, (not stalks,) and beets, mangold wurtzel, carrots and turnips, in warm stables. On rainy days my men have to cut the fodder, and it is fed, with a little mill feed and oil cake meal, for a change. During the latter part of spring and in summer I feed my cattle in the stable or in a shaded yard, on grass, clover, cornfodder, mowed green and carted to the stables or yard. In this way I save all the manure, which enables me to feed my land well, and my land will feed my cattle in return from a few acres, where it would take four times as many acres to feed them half as well, and they are not tormented by the flies.

I have no manure sheds, and don't wish any, but I have always good muck to spread over the manure heap whenever it is brought out of my stables. I like the rain to fall on it, but not from the roofs. All the soap-suds and urine from the house is also spread over it. Besides the sun is only on it in the morning.

I mix all my manure as much as possible—first a layer of horse manure, then cow, and sometimes hog manure, and then muck. My pit will hold 125 loads, and I never have any fire-fanged. The urine from the stables runs into the manure pit. I plow deep, and always in the fall. I plow my manure under whenever I can, and I am never afraid of its sinking down; if so, the subsoil would always be the richest, which you all know is not so. I am more afraid of the sun and wind. I sow in spring clover seed on wheat, rye, &c., in fact wherever I can, which grows up to 10 or 12 inches by the next fall. I do so even in land where clover has grown the previous year, and I always have some green matter to plow under with the wheat stubble.

I am a strong advocate for rotation of crops, and of underdraining.

I shall now haul from Baltimore, which is 8 miles, shell lime, 50 bushels to the acre. I buy only butcher manure, which I compost with bone dust, muck, salt, ashes and plaster. No guano or other mixtures. Bone dust gives my land the phosphates, ashes the potash, salt the soda, plaster the sulphate, and the lime the magnesia. As to the ammonia, I trust to the stable and hen manure, and to the surrounding elements. I would add that my cows do not chew bones any more since I put bone dust on my land.

Baltimore Co., Md. G. H. MITTNACHT.

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[For the Country Gentleman and Cultivator.]

SAVING GRASS SEED.

Messrs. Editors—In order to have *good* hay—and this is a very important item—we must start aright, and sow clean seed. "For whatsoever a man soweth, that shall he also reap." If he sows sorrel, dock, daisies or Canada thistles, he will not be very likely to get a good crop of timothy or clover. Hence the importance of *knowing* that the seed sown is free from foul stuff. It is very difficult to *know* this if we buy the seed; for there is a great deal of this article bought and sold, that no progressive farmer would like to sow upon his land, if he knew just what it was. I have seen grass saved for seed that was too foul to make good hay. I therefore think that every farmer should aim to save seed sufficient for his own use, but not in the slovenly way practiced by some, of saving it from the mow during the winter when foddering out the hay, or by thrashing a part of the mow.

There are serious objections to this mode of obtaining grass seed. In the first place, grass that is not cut before the seed has matured sufficiently for seeding makes very *poor hay*—is not worth more than half as much as it would have been, had it been cut when in full bloom; and then you are pretty sure to get foul seed. Very few meadows are clean enough as a whole for seed.

The best way to do this business, I think, is to select a portion of the meadow where the grass is not so stout as to be liable to lodge—if the grass is very thick, the heads will not be as long nor the seeds as plump, and where it is clean, free from thistles and weeds, and let it stand until the heads begin to turn brown and the seed is pretty hard—ripe. Then with a cradle cut off the heads just low enough, so as to be able to bind them in small bundles. As soon as the grass is wilted, bind and set it up into bunches, and let it stand several days, if the weather is good, and if you have hay caps, put them over it. The best way is to thrash it at once as it is drawn in—this saves considerable loss by shelling. After the seed is cut the bottom can be mowed, and if it is pretty thick with white clover and fine grass, it makes *tolerable* hay. *Caution.*—Do not make too free use with the stems after thrashing as fodder. Cattle are affected by eating them very much as they are when kept on straw.

By saving grass seed in this way, every farmer can have that which is clean if he chooses. At any rate, if his meadows are foul, he cannot throw the blame upon some rascally brother, who raised the seed and put it into the market. J. L. R. *Jefferson Co., N. Y.*

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An Energetic Farmers' Club.—The Annual Report of the Farmers' Club of Little Falls, (for which we are indebted to X. A. Willard, the Secretary,) indicates it to be a prosperous organization. There are 225 permanent members, and $480 were awarded last autumn in premiums. The whole receipts and expenditures were nearly $900 each—over $600 received from the sale of tickets.

[For the Country Gentleman and Cultivator.]

NOT GYPSUM ENOUGH USED.

Messrs. Editors—It seems to be a well established fact that the use of "gypsum or plaster of Paris," is beneficial to many kinds of soil, and that some plants, as the clover, are more benefited by it than other grasses.

Now if it is a fact that some farms are benefited by the use of it, it is also a fact that some farmers do not use so much of it as would be for their interest. I have a lot of land in Deerfield Meadow, a part of which is a low flat, and is flooded by the Deerfield river in high water. This low land is sandy, and had been mowed many years up to 1855, when it was planted to corn, with a little manure in the hill, and the crop was light, not more than 25 to 28 bushels to the acre.

The following year (1856) it was manured broadcast with about fourteen cart loads to the acre, and plowed in about 6 inches deep, and planted again with corn. At the third hoeing (in July) it was seeded liberally with herdsgrass and clover. The following spring (1857) the stalks were cut close to the ground, and carted off, and about 100 lbs. of plaster sowed to the acre. A heavy crop of grass was cut from it the last of June, and a lighter, though a very good crop of rowen, was cut in September.

The following spring, 1858, about the same amount of plaster was sowed upon it again, and a good crop of grass was the result. It has been managed in the same way to the present time, (sowing plaster in the spring,) and I think a large profit has been realized from the plaster so used.

I have used about 100 lbs. to the acre also on my pasture annually, (which is a clay loam,) and I am satisfied that the benefit derived from the use of it is more than 100 per cent.

Three or four years since one of my neighbors living three-fourths of a mile west of me, sowed two casts of plaster on a hill pasture west of his house, from the foot of hill to the top. Those two strips of land where the plaster was sowed could be distinctly seen from my residence, as the grass was very green and luxuriant in contrast with other parts of the field. Many pastures in this vicinity have become very productive by the use of plaster; it not only acts as a "retainer of ammonia," but "converts the humus in the soil into food for plants." I have the authority of the "American Muck Book" for the following: "Native plaster contains 21 per cent of water, 33 of lime, and 46 of sulphuric acid."

Deerfield, Mass., 1862. JAMES CHILDS.

[For the Country Gentleman and Cultivator.]

CORN GROWING IN MASSACHUSETTS.

Editors Country Gentleman—I notice that D. Davis of Fall River, Mass., and C. B., wish me to inform them how I raised the crop of corn alluded to by J. W. in your paper of Feb. 20.

In the first place it is very important to have the best seed that ripens in the field standing. It should be fully ripe before it is gathered, then braided up and hung in a cool, dry place. Weak seed produces a weak plant. My crop, which I weighed, was raised in 1860. My land is sandy loam. I manure with the pure article from my stock. I load about twenty bushels into my horse-cart to a load, and dump the load at convenient distances apart to spread, and turn that down eight inches, and turn up a like crop of manure which was placed there in 1859. I plow green sward the day before I wish to plant. The variety of corn, the Cap or Canada, called here the "Demond corn." I drill my corn in with a machine, about three feet apart, two and a half stalks to a foot, cultivate twice with care, and an eye to every weed, and hoe flat, or with no hill. My planting was finished on the 25th of April.

If corn is your object, plant as early as your ground will allow, for early planting produces small stover and heavy corn—late planting produces large stover and lighter corn.

I commenced harvesting Sept. 7, 1860—had some ground on the 10th of September, and it ground very well.

As I have not the corn to show C. B., and as he appears to be a little skeptical, I will refer him to my neighbors, and W. A. Robbins, who lives with me now, who weighed and measured the same—also to J. H. Chapin and J. H. Demond of Springfield, Mass., and A. L. McKinstry of Chicopee, Mass. The above gentlemen gave their particular attention to the crop—also many others that I could mention. C. B., don't be afraid to write your name and place of residence in a good cause.

Agawam, Mass. WILBUR WILSON.

P. S.—The stover of the crop of corn which J. W. refers to in the Co. Gent. of Feb. 20, weighed when thoroughly dried, 5,800 and odd pounds.

We have also a reply to Mr. Davis and C. B., from J. W., which the above renders it unnecessary to publish; but we may add from J. W.'s notes, what Mr. Wilbur does not state, that the land on which the large crop of corn was raised, was in corn and turnips the previous year, and that fifteen cords of manure were applied per acre for the crop of 1860.

[For the Country Gentleman and Cultivator.]

Legal Weight of Grain Per Bushel.

Eds. Co. Gent.—In your paper of March 13th, on the 176th page, J. S. H. inquires if the standard weight of a bushel of corn has been changed from 56 pounds to 58 pounds, and if yes, at what session of the legislature such a change was made, and where the law may be found. I answer, the standard weight of a bushel of corn was changed from 56 pounds to 58 pounds by act of the legislature passed April 15th, 1857. See 2d vol., p. 190, of Session Laws of 1857, Chap. 560:

> § 1. Section thirty-six of title two of chapter nineteen of part first of the Revised Statutes, as ammended by chapter three hundred and seventy-four of the Laws of eighteen hundred and thirty-six, is hereby amended so as to read as follows:
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> § 13. Whenever wheat. rye, Indian corn, buckwheat. barley. oats, beans. peas. clover seed, timothy seed, flaxseed or potatoes shall be sold by the bushel. and no special agreement be made by the parties as to the mode of measuring. the bushel shall consist of sixty-two pounds of beans. sixty pounds of wheat. peas. clover seed or potatoes, fifty-eight pounds of Indian corn. fifty-six pounds of rye. fifty-five pounds of flaxseed, forty-eight pounds of buckwheat or barley, forty-four pounds of timothy seed. and thirty-two pounds of oats.

Ogdensburgh, March 14, 1862. DANIEL MAGONE, Jr.

[For the Country Gentleman and Cultivator.]

CROSS DRAGGING.

Messrs. Editors—I noticed a few weeks ago some remarks by one of your correspondents—I don't recollect the writer's signature—in regard to dragging in grain, which fully met my views. He said, in substance, that after grain was sowed, the ground should be dragged but *one way*—that *cross* dragging brought more of the seed to the top of the ground than it covered, and was therefore worse than useless. I think the writer quite correct. It is a better way, in my opinion, to fit the ground thoroughly *before* sowing the seed, so that it shall require but once going over with the drag *after* sowing the seed. And this last dragging should be *crosswise* of the last dragging *previous* to sowing the seed.

Some farmers are in the habit of *partially* fitting the ground before sowing the seed, and then attempt to "kill two birds with one stone"—fit the ground and cover the seed—after seeding. The first bird, I think, had better be killed before the seed is sown. J. L. R.

Jefferson Co., N. Y.

☞ A prize Mangold Root grown in Berkshire, England, the past season, and lately exhibited, weighed 31 pounds!

[For the Country Gentleman and Cultivator.]

On the Construction of the Bee-Hive.

Messrs. Editors—M. Quimby's Mysteries of Bee-Keeping Explained, is the most practical common-sense book on the management of bees and bee-hives, that I have read in any language. To learn how to have *good luck* in bee-keeping, and how to get surplus honey of the choicest kind and in the largest quantity, M. Quimby's book should be in the hands of every owner of a hive with a swarm of bees.

In the Bee-Keepers Department of the Country Gentleman, last Jan. 2d, I find an article on the construction and size of hives from the pen of that celebrated American bee-master. M. Quimby being of the opinion that the only improvements which can be made in a bee-hive, must be to afford facilities in managing the bees, by easy access to the interior of the hive. It is evident that those hives constructed upon the movable frame principle are the best, and I will not deny the fact that they do give great advantages in the hands of experienced and skillful bee-masters. But, may I be permitted to say that all those movable frame hives I am acquainted with, are, upon the whole, ill-shaped and unwieldy constructions to move about with, and they do in no shape or manner compare with the light, simple and nicely proportioned Quimby box hive and cover, which can be carried about any distance, affording all the facilities necessary to collect the purest honey, and every way adapted to the best management of the bees during winter or summer as consistent with the climate and the wants of the nature of the insect. This Quimby hive must therefore, for common use and general management, receive the preference over all other hives, being cheaper, easier of construction, and much less complicated than the movable frame hives. It is, in my humble opinion, the most simple, and at the same time the best hive now in use. As proof thereof, I will only state that all those who have abandoned their numerous patent hives, and returned to this old box hive, have, invariably, by following the instructions laid down in Quimby's book, secured *the best of luck* with the bees.

We are again fast returning to the days when "the little busy bee will improve each shining hour." The swarming and honey making season will be upon the bee-keeper in due time, and hives should be formed ready for the moment. Farmers who keep bees should make their own hives, and the leisure hours of March may be improved to make the number of hives which will be needed, that they may be painted somewhat beforehand.

For the benefit of your bee-keeping readers, it may perhaps not be uninteresting to give you my mode of constructing the hive. My introduction of the loose bars and rabbets in the upper part of the hive is no novelty, and but a very trifling increase of expense in material and labor; the whole concern of hive and bars, cover, bottom-board and two coats of paint, does not cost me over seventy cents to the single stand. But the hive thus constructed with the guide bars, &c., is an improvement which has given me full satisfaction these two years past, and to all intents and purposes, I consider the hive thus improved, the most convenient for summer or winter management of the bees that I have ever used.

Using the Quimby hive as described in Country Gentleman, Jan. 2d, 1862, roof sticks and all, I have not wished to depart much from the almost classical dimensions of that hive. To introduce the guide bar, I have therefore merely added one half inch to height of the hive, making the box 14 and one half inches high, instead of 14 inches. The upper edges of the front and rear sides of the hive are next rabbeted out half an inch square, (using inch pine boards for the hives) to receive one inch triangular guide bars or slats, cut out at each end to within the quarter of an inch of their tops, and to rest flat with the angle down in the rabbets. These triangular guide bars, eight in number for a hive of the Quimby size, are nicely adjusted, and fastened in the rabbits with a ¾ inch brad, leaving opening or interspaces distributed between the bars as follows: three-eighths of an inch interspace between the two centre guide bars, seven-sixteenths of an inch interspace between the next three bars on each side of the centre bars, and having half an inch interspace between the last guide bar and the sides of the hive.

The advantages derived from these triangular guide bars, left rough as they come from the saw, are—1st, that the bees uniformly build their combs straight down along the angle of the bars, and the top board of the hive with the same number and rows of holes being screwed to the top of the hive with four inch and a half tapering screws in a manner that the rows of said passages will run crosswise of or at right angles with the inside guide bars, it leaves an opening or nearly so, between every comb, and facilitates free and unobstructed ingress and egress of the bees to the surplus honey boxes when placed on the top of the hives.—2d. Perfect ventilation is secured at all times but particularly in winter, without inverting the hives, by merely opening these passages to the surplus honey boxes in the top of the hive, or removing the top board altogether, as the necessities of the swarm or the place where the bees are wintered might require.

A dark cellar, not too warm or too excessively damp, where the temperature is even during winter, not over or below 40° above 0. of Fahr, is a good place to winter bees. In November, or at the approach of winter, before removing the hives to the dark cellar, the weight of the empty hive being known, they are weighed again—the hives being numbered, this number and weight is put down in a little book kept for the purpose, and the contents of hives can be ascertained at any time. The passages in the honey board are next opened, or the honey board is unscrewed and entirely removed, as the case will require. The bees are left slumbering in the dark, undisturbed excepting to clean or change the bottom boards of the hives every 30 or 40 days during winter. If feeding is found necessary with any of the swarms, pieces of comb containing honey are put on the top of the guide bars; if honey in the comb cannot be had, strained honey may be used and poured in old pieces of empty combs or small round shallow dishes, with concentric grooves for feeding troughs, like those described in Bevan's work on the Honey Bee, and the bees thus wintered come out in the spring very little diminished in number or stock of honey, and with their combs as clear, bright and sound as can well be expected after a confinement of three or four months. J. N. R.

Jefferson Co., 15th March, 1862.

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[For the Country Gentleman and Cultivator.]

How to Get a Large Crop of Corn.

It has been fully proved in this warm calcareous region of Western New-York, that the largest yield of Indian corn can only be grown when the seed of the many rowed dent variety is imported direct from the prairies, and early planted on a highly manured, well drained soil, and afterwards thoroughly cultivated. Joseph Wright of Waterloo, has not failed once in the last three seasons to get over one hundred bushels of shelled corn to the acre—Illinois red cob dent corn—while the improved flint variety in the next field, with the same amount of manure, on like soil, yielded full one-third less grain, with a heavier cob. He will procure more seed from Illinois this spring to plant another eight acre field. S. W.

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[For the Country Gentleman and Cultivator.

PRODUCT OF A SHORT-HORN HEIFER.

Luther Tucker & Son—I send you an account of milk and butter produced in ten days by my Short-Horn heifer Bell-Flower 2d. She calved February 6th, and will be four years old the 21st of March—made from the 13th to the 18th inst. ten pounds ten ounces of butter; the remaining five days eight pounds thirteen ounces. The quantity of milk was a little more the latter part of the trial, the butter less, owing, I think, to the change of weather, which was quite unfavorable in gathering the cream. She gave during the ten days of trial 197½ quarts of milk, making by weight 426 pounds, the same milk producing nineteen pounds seven ounces of butter. Feed was hay of excellent quality, and six quarts provender per day. She had given milk one year fourteen days previous to being dry, which was six weeks only to the time when she came in milk again.

Her dam Bell Flower, when four years old, in twenty-one days of the month of April, and ten days of the month of June, gave five barrels ten and a half gallons, the same milk producing fifty-four pounds eleven ounces of butter. Her feed was four quarts provender per day. This I consider a good yield of milk and butter for Short-Horns that have been fed and raised upon the Talcott Mountains.

Avon, Ct., Feb. 25, 1862. E. A. PHELPS.

MANURING WITH GREEN CROPS.

I have two pieces of land which I wish to manure by plowing in some kind of green crops next summer; but having never yet tried this plan, I am somewhat at a loss to tell what crop will be best for this purpose; the soil a heavy loam and one of the fields is an orchard.

How would winter rye do if sown early next spring? I have somewhere seen the White Lupin highly recommended for this purpose; would it probably succeed upon heavy soils and where can the seed be obtained?

Vetches or tares are said to be much cultivated on heavy soils in England for soiling. Would they be a valuable crop for plowing in when green? And do they succeed well here? Please to answer through THE CULTIVATOR, and you will greatly oblige one

Middlesex Co., Mass., Feb. 1862. OLD SUBSCRIBER.

Clover is the best green crop for plowing under as manure. The whole plant not only possesses considerable enriching quality, but the roots render an important mechanical service by running deep and rendering the inverted sod loose and mellow, which is of great value on such heavy lands as those our correspondent speaks of. Without the clover, the sod would turn over heavy and compact. We cannot say much in favor of rye—have not seen it tried. Every thing in the shape of green vegetables is useful, but leguminous plants, as clover, peas, &c., most so. The vetch is of this order, but we have no knowledge of its successful culture in this country. Some easily grown, leguminous plant, that would afford a heavy growth for this purpose the same year after sowing, could it be found, would be a great acquisition. In the mean time, we should be glad to see thickly sown cornstalks tried.

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[For the Country Gentleman and Cultivator.]

WILLOW HEDGES.

EDS. CO. GENT.—I have received several letters of inquiry about my Basket Willow Hedge, which reminds me of the boy who, when his companions had tickled him out of breath, after standing a short time to recover, says, "do it again." I supposed that I had written all that was necessary to make a good fence from the Osier willow, but if your readers desire to hear more about it, I am willing to "do it again."

First—set in early spring a single row of good fresh and large cuttings—push into well prepared soil, perpendicularly, thirty-three to the rod, leaving about two inches above the surface. If the soil is not rich, it should be well manured. Stretch a line to set by, to have the hedge straight. Keep down all weeds and grass. The willow, if set early on good soil, will make a growth of four feet the first summer.

Cut all off close to the ground the second spring. Hoe once if weeds appear, and you will have a growth, dense and pretty, eight feet high the second fall. Form into a hedge by drawing a line through the center three or four feet high; cut off the rods that touch the line evenly on top by the line; these form living stakes or standards, and should be about three or four inches apart, through which the uncut willow is interlaced according to fancy, finishing up with a sort of rope-like binding on top.

The hedge is now complete, with the exception of covering it with thorns. This is done by cutting off the Osiers slanting, with a pruning knife. Each stub left thus cut makes a good sharp thorn.

My first twenty rods of hedge was cut at three feet from the surface. Wishing to increase its height, I proceeded as follows—cut the Osiers at two inches above the original top binding, leaving one standing at every three inches in a straight line, the whole length of the hedge; then commence with the first Osier, passing it back around the cedar stake at the end of the hedge, bringing it forward and passing it on the right of the first standing Osier, and to the left of the next, and so proceed the length of the Osier, which in mine was an average of about five feet. Bend the next Osier at about six inches above the old line, and work it into line same as the first, and so continue through; each Osier holds the one back of it in place, and the whole forms a nice addition to the hedge, and adds to its strength.

I like it. Why? First, because it bears any amount of freezing without injury, and it is not injured by field mice or rabbits. It looks very pretty, costs but little. One hedge furnishes the material ready for the next. It makes a paying fence. Each rod three years old will furnish material sufficient for four corn baskets of two bushels each, without injury to itself, but be improved by the additional thorns produced by cutting off the osiers. Therefore I like it because its general introduction will be of large benefit to the country, multiplying home comforts, and stopping the importation of foreign Osiers. I like them because I like to see the children happy, and what makes better sport for them than to harness Fido and hitch him before the little willow waggon.

Victory, Cayuga Co., N. Y. D. L. HALSEY.

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[For the Country Gentleman and Cultivator.]

TAN-BARK AS A MANURE.

MESSRS. EDITORS—I have observed various statements as to the nature and value of spent tan-bark applied to crops or tillage land. Having made some experiments in a small way, bearing on the question, I will give the results.

On the 1st of July, I sowed broadcast on good alluvial soil well pulverized, carrots, ruta-bagas, and cabbage. I covered them with ¾ inch of tan-bark, quite fresh from the tannery. The growth was good, and crop as large as the length of season would allow.

I also planted potatoes in the same way, covering with 4 to 6 inches of fresh tan-bark. They had no other care, the weeds not growing. The crop was fair, under the circumstances—indicating no bad effect from the tanic acid of the covering.

I also raised good corn where tan was mixed with the soil in the proportion of one in four.

From these facts I have not hesitated to use it freely as an absorbent in my stables. My cows are bedded with it to a depth of 3 or 4 inches. It is hoed back into the drop as fast as it becomes wet. It then becomes thoroughly mixed with the manure, making about double the bulk. It is daily loaded into a cart and hauled to the fields, where it is deposited in heaps.

The great advantages I get are, a more perfect distribution of the manure in spreading—economy in getting *all* the manurial qualities on to the ground—neatness of stables, and saving all the trouble in plowing, drilling in seeds, and cultivating, when coarse straw manure is used, as it must be, or one year lost in rotting it.

Dried muck is undoubtedly best. But I can't get it; and it is much more expensive in procuring and hauling, as a general thing, where tan is within reach.

My land is alluvial, a little inclined to be heavy, and I anticipate good results from the light open nature of the tan.

I procure my supply (about 150 loads) in dry weather, and place in the bottom of a bay, convenient for use. Frost only crusts over the top, giving no trouble.

Elmira, N. Y. "TAPE-LINE."

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HERB GARDEN.—The Herb Garden of Mr. W. Holland at Market Deeping, is described in the London Gardner's Chronicle of Oct. 19. From it we learn that about ninety acres are devoted to the cultivation of Peppermint, which requires for five weeks the constant employment of four large stills. Belladonna, Monkshood, Aconitum, Dill, and Poppies, are also largely cultivated.

Domestic Economy and Cookery.

[For the Country Gentleman and Cultivator.]

Sorghum Sugar—Rye Coffee.

Eds. Co. Gentleman—In looking over your recent numbers, I am very much pleased to see that Sorghum is at last asserting its valuable properties as a source of national economy. From imperfect experiments made in this vicinity two or three years since, I have never doubted for a moment the entire practicability and profitableness of its culture, destined at no distant period to supersede, in a great degree, our dependance on more sunny regions for sugars and syrups. It is a subject which most emphatically demands the attention of farmers at this time; more especially, however, in those vast regions of the interior where breadstuffs of all kinds are so low that they will scarcely pay for transportation to market. A large proportion of land now appropriated to the growing of wheat, corn, &c., might be most advantageously devoted to Sorghum, and thus in some degree equalize the the price of articles for home consumption, so that sugars and syrups would be as little expensive in the far west as they are at the seaboard.

My more immediate object in this communication was to say that some of us here, in view of high prices demanded for coffee, have been trying an old substitute, which we think answers a very good purpose—much better than chicory and a dozen other spurious articles palmed upon the public in these days, for coffee. I will give you the mode, and my brother farmers can try it if they choose.

Take clean rye—scald and wash it in water, then dry it in the oven or some other convenient place; brown or parch, and grind it, as is done to coffee. One-third mixed with two-thirds of coffee will scarcely be detected by the most rigid coffee-taster. Some prefer equal parts of rye and coffee. It is worth a trial, and in many cases this modification of the favorite beverage will be preferred, independent of its claims on the score of economy. R. M. Conklin. *Cold Spring, L. I.*

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[For the Country Gentleman and Cultivator.]

Leather Varnish for Boots and Shoes.

Many people oil and grease, and grease and oil their boots, with a view to render them impervious to water, until the oil may be pressed out of the leather. Oil alone, or oil and soft grease is poor stuff to exclude water from passing through the pores of the leather, and if the pores be filled with oil, water will drain the oil through on to one's stockings, making cold and uncomfortable feet.

For a few years past I have used a kind of leather varnish for excluding moisture from boots and shoes, which is a very valuable article for preserving leather and for excluding moisture. The way to make it:—

Procure a quart bottle or jug, and put in it a half pound of "gum shellac" or shellac, which may be obtained at the drug store. The shellac should be broken up fine. Now pour in good alcohol enough to cover it, and place it on a shelf in a warm place, and cork the bottle tight, or the alcohol will soon evaporate. Shake it well several times daily. To this add a piece of gum camphor about as large as a hen's egg, and then add about one ounce of good lamp black, and shake it well. If the alcohol is good, the shellac will all be dissolved in about three days, when it will be ready for use.

Let the bottle be well shaken before using any of it. Should it ever appear to be too thick, add more alcohol; and if too thin add shellac.

I grease my boots and shoes lightly, when they appear to need it, and then give them a good coat of varnish. Pour out two or three spoonfuls into a little dish, and with a small paint brush varnish the boots. If it is good, it will dry in six minutes; and will literally *wear* off before it can be removed; and it will form a gloss almost equal to patent leather.

The great excellence of it is, it does not strike *into* the leather, so as to render it hard and brittle, but remains on the *surface*, and excludes the water most effectually.

Besides using this varnish for boots for several years past, with good satisfaction, I have used it for varnishing harness, after they had been oiled, for which purpose I always found it a choice article, as it would keep a harness in good condition for a long period of time, when nothing but oil and lamp black would black every thing that touched it.

The Poulterer's Companion.

[For the Country Gentleman and Cultivator.]

REARING CHICKENS.

In rearing chickens, there are many things to be known. First, but not least, particular attention should be paid to the hen under which the eggs are put. Never set eggs under a wild or scary hen, for her chickens will certainly partake of her character. On the contrary, place eggs under a tame hen, and her chickens will follow her habits; but yet chickens will become very wild if they are allowed to be chased about, and not much care taken of them, even if they are brooded under ever so tame a hen. Hens should be set in some sheltered place, where the other hens cannot disturb them, and where there is not much passing in and out. This secures to the hen that quiet so necessary to incubation.

Should a hen commence sitting in an inconvenient place, remove her to a good one, and fasten her on by placing a coop or some such article over her; keep her there three or four days, feeding her on the nest, and unless she is unusually perverse in her ways she will stay there till she hatches the eggs.

In the nest sprinkle a little tobacco to prevent the vermin from entering.

Never have the nest in a low place, for you are liable to lose both your hen and eggs by the skunks. Put from twelve to sixteen eggs under a hen, according to her size.

Take the chickens as fast as they come out of the shells, and place them in a basket lined with some soft substance, as wool for example, and place them in a warm situation. If the eggs are not all hatched by night, put the chickens under the hen till morning, and then return them to the basket. This is done as a precautionary measure, lest some of the chickens should be killed. When all of the eggs have hatched that will, put the hen and her chickens in a coop. The coop should be large, and so constructed as to admit of a free circulation of air.

I know from experience that it is best to have the coop in some building, where you can shut the chickens in, when it is stormy or the grass is wet. Never feed meal ground fine to chickens; it will do very well for old hens, but for chickens you should take your corn to the mill and have it *just* cracked; give the miller a special injunction to crack it very coarse. Feed the corn dry, place a dish of pure cool water by the side of it, and the chickens will wet it in their crops to suit themselves. For a change of food, feed fresh meat boiled (never feed salt meat,) cooked potatoes, &c.

Don't raise so many chickens as to be overrun with them; for a farm of a few acres, rather raise twenty-five or thirty, and take good care of them, than to raise one hundred and provide for them poorly; for if chickens are worth raising at all, they are worth raising well. Take good care of them if you would have fine fowls. Take care that your chickens do not get lousy, as they sometimes will; if they should, sprinkle ashes on them; they will not thrive in such a condition.

In the fall, say along in Dec., kill off all the roosters but one or two. It is poor economy to keep four or five males over till spring when a less number will do as well.

Always reserve the largest and best formed cocks for breeding as well as the finest pullets. O. S. C.

Kiantone, N. Y.

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TRANSPORTATION OF EGGS.

Messrs. Editors—In reply to your correspondent T. F. of Cincinnati, I would state that I have repeatedly hatched hen's eggs received by steamer from England. I have raised Game, Black Spanish, Dorking and Cochin China fowls in this way, but have never succeeded with the eggs of the Sebright Bantam, although I have now more than a dozen of English Pheasants hatched from eggs imported last spring I will be happy to communicate with your correspondent.

Newport, R. I., Feb. 19, 1862. ROBERT L. MAITLAND.

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Dogs vs. Sheep.—A Cleveland paper says—There were killed by dogs in Ohio during the year 1861, 42,781 sheep, valued at $64,216.25. During the same period there were injured 19,000, valued at $32,579.70; total, 61,781 sheep, at $96,795.95!

Rural Architecture.

TWO KINDS OF HOMES.

Country homes are of two kinds—the repulsive and the beautiful. The former are occupied by those who know nothing of domestic enjoyment, and who seek happiness in the bar-room and grog-shop. They never see any charms in the works of nature—ornamental shrubbery to them is "brush," and flowers are only "weeds." They never plant a rose-bush nor a shade tree. They sometimes set out a few apple and cherry trees. But these are left to take care of themselves, and what remain after ten years, appear like those shown in figure 1, instead of attaining the perfection shown in figure 2, as they would have done if well managed and properly cultivated. They have an especial contempt for all ornamental trees, and exclaim, "What! set out trees that don't bear anything fit to eat—that are only good to look at!" Their dwellings are bleak and desolate. There is nothing about them attractive to their children, who grow up with no attachment to home, and with little appreciation of the social virtues. Figure three is a representation of all that is inviting in the homes of their childhood, and where from the earliest dawn of their forming minds, they have received most of their impressions of life. Few of them have been able to surmount these discouraging influences, and they have become coarse and unintelligent. How different might have been their character if they had been brought up under the influences of the other home represented by figure four.

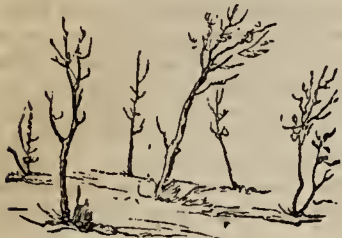
Fig. 1.

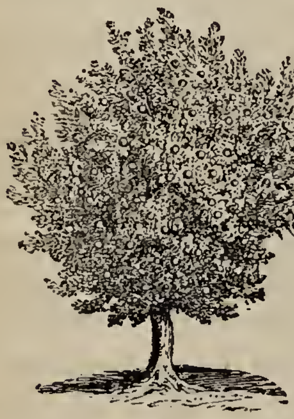
Fig. 2.

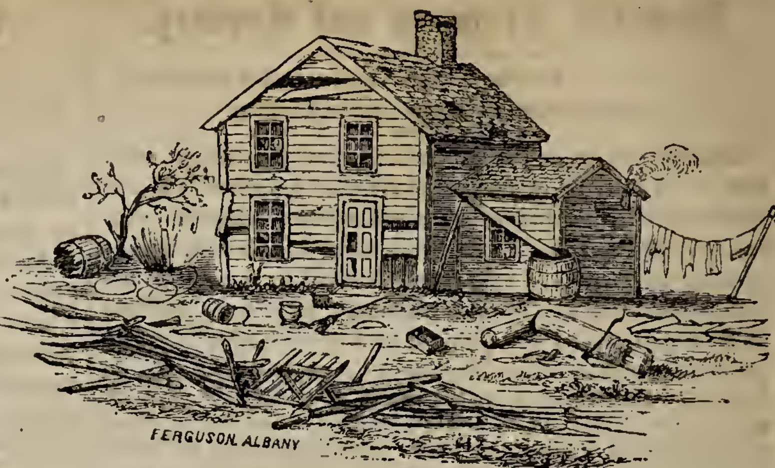

Fig. 3—Premises of the Man "who cares nothing for looks," nor for the Comforts of Home.

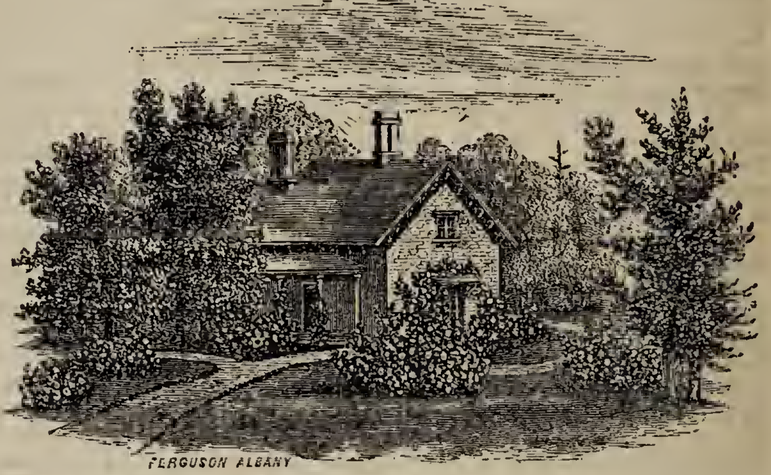

Fig. 4—Premises of the Man who makes Home attractive to his Children.

This neat cottage (fig. 4) cost no more in the first place than the dilapidated one. Its owner kept it in perfect repair, and planted and cultivated the encircling grounds during those spare moments that his neighbor who lives in the other, occupied in the tavern. Each house cost nearly a thousand dollars in building; while the planting and cultivation of the grounds about the latter, did not require an expenditure of fifty dollars.

There is now scarcely an intelligent mind who does not admit for the above reasons, the real and substantial value and utility of ornamental planting. Added to its utility, is the fascinating employment of imitating the most beautiful natural groupings of objects, by planting and arranging trees. With all these inducements, great and increased attention should be given to the subject, and it would open a world of exalted enjoyment to those who pursue it. Most fortunately, it does not require necessarily a profuse expenditure of money. As much skill may be employed in decorating the limited grounds of a cottage, at an expense within fifty dollars, as in laying out and planting a magnificent park of hundreds of acres, costing many ten thousands.

Tucker's Illustrated Annual Register.

A ROOM FOR FARM LABORERS.

For many years we have strongly advocated, (as well as carried out in practice,) the policy of erecting laborers' cottages, and employing hands who would thus board themselves. This would be a great relief to farmers' wives and daughters, and remove one of the most unpleasant and oppressive parts of farming. But where this is not, cannot, or will not be adopted, then a laborers' room should be provided, where they can spend their evenings, and other vacant time. Gen. Sulton, of Salem, Mass., stated at one of the legislative meetings, at Boston, that he had, besides his barns, stables, &c., a building as a shed for carts and coarser tools, with another room for smaller implements, a carpenter's shop for home repairs, and *a room for farm laborers.* "The latter," he remarks, "is regarded as one of the most useful apartments on the premises. It is well finished, and provided with a stove and seats. Here the agricultural papers are kept, and the men spend the evenings in reading them."

Such a room would also answer for an *Office*, (if there is no other) to be used for settling with the men, making bargains, and other matters with which the inmates of the dwelling should not be troubled.

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Vermont.—At a meeting of the Directors of the Vermont State Agricultural Society held at Bellows Falls, Feb. 12th, the Hon. H. Henry Baxter having declined the office of President, on motion of the Hon. J. W. Colburn, the Hon. Edwin Hammond, of Middlebury, was unanimously elected President for the ensuing year. A series of Resolutions were adopted, that a Convention of Wool Growers should be called, to be held under the auspices of the Vermont State Agricultural Society at Rutland, Sept. 9th—the first day of the State Fair.

The Horticultural Department
A. J. Downing

[For the Country Gentleman and Cultivator.]

ON GRAFTING GRAPES.

Having seen numerous inquiries on this subject, some of them in the COUNTRY GENTLEMAN I think, I am induced to give my experience on the subject.

1. REASONS FOR GRAFTING THE GRAPE.—*a.* You are thus able speedily to change a large and thrifty vine whose fruit is poor, into one whose fruit is valuable. A vine of moderate size in a favorable year, will sometimes show flowers the year it is grafted. You may always expect a moderate crop of fruit the second year, and a heavy one the third year.

b. Occasionally too, in some varieties of grapes, the organs of fructification are imperfect from the excess of stamens; hence the vine is a shy bearer. Here the advantage of grafting, with a free and perfect flowering variety, is apparent.

c. There is no perceptible gain to hardiness, in grafting a tender variety on a hardy stock; such in my experience have been just as liable to mildew, in hot, damp weather, as when grown on their own roots. The scions I have mostly used were the early Black July, Miller's Burgundy, Violet, and Golden Chasselas.

2. TIME OF GRAFTING.—*a.* Very early in the spring, as soon as the frost is out of the ground, which is here from the 1st to the 10th of April usually, at least in protected positions, where the grape is usually planted. Grafted at this time, the grape does not bleed when finally the sap starts.

b. In the early summer, when the vine has made considerable growth, and the larger leaves have attained a full expansion. This period here is usually from the 25th to the 30th of June. At this time the sap begins to thicken and granulates readily. Even now, if on trial the stocks are found to bleed much, the operation should be deferred a few days. There is but little difference in the success of grafting at these two periods. There are however, two very obvious advantages in early grafting. The first arises from the difficulty of preserving your grafts from sprouting and blackening until the later period. The second is the superior ripeness of the young wood, and its consequent ability to meet the winter, especially where early autumn frosts occur.

3. STOCKS USED.—From about 1845 to 1852, I grafted perhaps 150 stocks. They comprehended two or three native sorts, said to have been brought originally from Connecticut, two or three native sorts of unknown origin, and many Isabellas and Catawbas.

4. MODE OF GRAFTING THE GRAPE.—*a.* Saw off the stock two or three inches below the ordinary surface of the soil, cutting it a little higher or lower, if you can thereby get a clean split for your scion. The vine will sometimes exhibit a collar just below the surface, which will not give a good split; I prefer to go below this, even at the expense of cutting off some of the side-roots.

b. Pare off the stock smoothly with a sharp knife.

c. Split it two or three inches as in ordinary cleft grafting, and open it with a wedge if the stock is very large.

d. Let your graft be two buds long, leaving one inch of wood at least, above, and two or three below to constitute the wedge.

e. With a very sharp knife, bring your graft to a wedge shape, as in the case of ordinary cleft grafting, having the lower bud on the outside of the stock.

f. Insert your graft so that bark meets bark, as in other similar cases.

g. If your stock is large, and your grafts numerous and perhaps poor, set a graft in each side.

h. If your vine is small, tie the graft in, being careful to use strings that will decay readily, so that you need not subsequently have to loosen them. A narrow strip of cotton cloth is good.

i. I sometimes have clayed or waxed the graft, and often not. The earth falling into the cleft seems harmless, as that part of the stock immediately in contact with the graft is alone important.

j. Bring the earth back around the graft, leaving the lower bud just covered. It will readily press through the soil if it starts well.

k. I like to put a drop of the shellac varnish on the top of the graft, to prevent its drying up.

l. Stick down a shingle or half a barrel stave just south of the graft, so as to shield it for a few weeks from the noon-day sun, until it is well established.

m. If both buds start vigorously, break off the upper one, as one vine at the base is better than two.

n. Carefully pull up the sprouts which almost always spring up from below the graft.

o. Should your graft not start, or seem likely to die, let one sprout grow from the bottom, to become a future stock.

p. The first time you trim, cut back your vine severely if it be feeble, or the stock were small. Otherwise leave plenty of wood for a crop the second year.

q. Cultivate around your graft as you do in the case of any other grape.

5. DEGREE OF SUCCESS.—*a.* I am not an experienced grafter, having never set grafts of any kind before grafting the grape. Yet I now think, without recurring to my notes, that I have usually made from one-half to two-thirds of all my grafts live.

b. Much depends on timing things right, and in having sound, well ripened wood for grafts. C. E. GOODRICH.

Utica, March 17 1862.

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[For the Country Gentleman and Cultivator.]

FRUIT CULTURE IN SOUTH ILLINOIS.

EDS. CO. GENT.—According to present indications we shall have a full fruit crop in "Egypt" the coming season. The peach buds are in good condition, as we have had no "warm spells" of sufficient duration to swell them since December. The weather during January and February was moderately cold, the mercury falling below the zero mark but three times during the two months, and then but a few hours; the mean temperature being about 40°. The peach is sometimes seen in bloom here by the 10th March, but they will be considerably later this year as the buds have not yet commenced swelling.

The mania for planting large orchards of apple, pear and peach, is becoming quite prevalent, all along the Illinois Central Railroad from Cairo to Centralia. The great success of our leading peach growers last season, has given a new impetus to the business.

One man at Cobden Station, Union Co., made $3,000 from his young peach orchard of 1,600 trees—the entire crop was sold in Chicago, at from $1.00 to $2.50 per box (½ bushel.)

Two men at Makanda Station, from their peach orchard of 4,000 trees, shipped 12,000 half bushel boxes, which netted them over $12,000. This was the first crop from this orchard, but it shows what can be done in "Egypt." There has not been an entire failure of the peach crop here during the last 20 years, and there are seedling trees here 30 years old, still bearing bountiful crops. The winter of 1855–6, which killed to the ground nearly all the peaches in Northern Illinois, did no damage here, farther than killing a portion of the buds.

The most elevated lands for peach and pear—the apple will do well in almost any situation not too wet. Young fruit trees grow about one-fourth more here during the season than in New-York with same culture. For enterprising men who have a fondness for Pomology, there is plenty of room here to plant orchards, and a fair prospect of success financially, as the large towns in the Northwest are an immense market; and the demand will no doubt keep pace with the supply.

The culture of cotton here the coming season, is being talked of a good deal, and as it has been grown here for years with very fair success, its increased culture will not be an experiment. The original settlers from Tennessee and the Carolinas generally have their little "cotton patches" for domestic use, but this year the Yankees who have settled here will give it considerable attention. Sorghum will also come in for a good share of attention—our long hot summers seem to suit it well.

Our winter wheat looks well. The farmers have a large portion of last year's crop still on hand. Present price 65 cents per bushel; before the war from $1.00 to $1.50. The best market for our wheat and flour has been down south. A. Babcock.

Union Co., Ill., March 8, 1862.

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[For the Country Gentleman and Cultivator.]

PRUNING GRAPEVINES.

Messrs. Editors—Permit me to inquire what is the proper time to prune the vine? I am aware that most writers recommend January and February. It was my practice until about six years since to follow their advice; but in the latitude of New-York city, in which I reside, I must beg leave to differ from them—first, because we are subject to sudden cold snaps, as we call them—the young wood being exposed, suffers, and a large portion of the vine dies, and a short crop of fruit follows. Being satisfied of this *fact*, I prune my vines the last of *March*. By so doing I not only save my vines, but am rewarded by an abundant supply of that delicious fruit, which was not the case before. Some object to it because the vines lose too much sap, but as yet I have seen no injurious effects from it. Will some of your numerous correspondents give us their experience and oblige

Huntington, March 18, 1862. AN INQUIRER.

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[For the Country Gentleman and Cultivator.]

THE PEACH BORER.

This is one of the greatest troubles the peach orchardist has to contend with, and often proves very destructive. Various methods for disposing of them are employed; none so effectual as the prompt and thorough use of the knife.

The application of cloth recommended in Country Gentleman, Dec. 26th, for protection from rabbits, slightly modified will serve as a preventive. In this case as surely as any other, "an ounce of prevention is worth a pound of cure." In early spring remove the soil from about the collar, examine and remove any borers that may be there, commencing as low down as the roots will admit; wind narrow strips of cotton or other cloth closely around the bodies a foot above the ground, tie and return the soil to its place. The cloth may be removed after midsummer to be again applied the following spring.

Columbus, Ohio. A. G. HANFORD.

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[For the Country Gentleman and Cultivator.]

Marblehead Mammoth Drumhead Cabbage.

Messrs. Editors—Last spring I received of Mr. J. J. H. Gregory, a twenty-five cent package of the above cabbage seed, half of which, after dividing with a neighbor, was sown in a seed bed as soon as the ground would do to work. The plants were put out in the garden in June, and produced over a hundred of the largest and handsomest cabbages I have ever seen. They were also called so by all that saw them. Every plant headed, and the heads were all large and solid—I think at least double the size and weight of the common flat Dutch or Drumhead with the same cultivation. And they were not only large, but were white, sweet and tender, with a very small core for such large heads. We only found one difficulty with them, which was that some got ripe and rotted, and a few bursted before it was time to gather them for winter, but this may have been owing to a warm growing fall.

Orleans Co., N. Y. F.

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[For the Cultivator and Country Gentleman.]

CULTURE OF THE STRAWBERRY.

Having made a very satisfactory experiment in the culture of the strawberry, I am disposed to communicate it to your readers, though it may not prove as new to them as it was to me.

I have a circular flower garden enclosed by a wire net fence, and containing a little less than the eighth of an acre, on the south side of our dwelling-house. Next to the fence I have a border laid off about two and a half feet wide, for flowering shrubs, tall annuals, &c.; between this border and the flower beds a walk three feet wide. Early in April, 1858, I set strawberry plants for an edging to the border, about six inches apart, more from the want of a sufficient supply of bordering plants, than from the expectation of fruit from them. To my surprise, they produced abundantly the first year, and have yielded more and more profusely ever since. I keep it closely trimmed of course, and the border is closely set and neat, giving me less trouble in keeping out grass and weeds, than any other bordering plant. In 1860 I allowed some suckers to stray through the wire net and root in the grass outside, separating them as soon as rooted, from the plants inside. Last year these outside plants bore surprising quantities, and being shaded by the grass the fruit matured just as that upon the inside began to fail. The plants were sent to me by one of our best fruit culturists, without a name, but I should judge the variety must be the Albany Seedling. Fruit very large, abundant, and of pale red hue—more tart than the meadow strawberry, but resembles it in the form and flavor. As I am my own flower gardener, (what farmers' wife in New-England is not, especially when there is swamp land enough at hand to employ all the men who can be *paid* in reclaiming and subduing it?) I feel quite delighted with the result of my experiment. Dorcas. *Swanton, Vt.*

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Raising Pear Trees---Time for Pruning.

Raising Pear Trees.—Will you please answer through your paper, the mode of planting pear seed, and how long it will take before the trees from said seed will bear? W. Rogers. [Pear seed are to be treated precisely as those of the apple, in raising the seedlings—and when large enough or the next spring, set them out in nursery rows, and bud them when the bark peels freely. Cultivate, train, and transplant the same as apples, and in one or two to ten years, they will bear. If not well cared for, or neglected, they will probably die, or may bear in fifty years—if well managed, such early bearers as the Bartlett will give fine fruit in two or three years, while the Tyson and Dix may require six or eight.]

Time Fot Pruning.—Can you inform me the best time to prune young fruit trees? I have some that were set out last fall. By informing me through The Cultivator you will greatly oblige A Subscriber. *Birmingham, Mich.* [Light pruning, which removes but a small portion of the foliage, may be done early in summer; but all severe or heavy pruning should be done in winter, or before the buds swell in spring; and if the wounds are large, (which are never necessary unless the trees have been previously neglected, and become mis-shapen,) they should be covered with grafting wax, paint, tar and whiting, shellac in alcohol, or other suitable application, the shellac being best.]

RAISING APPLE TREES.

Will you please give advice to one who wishes to start the nursery business on a small scale; and is quite ignorant on the subject.

Shall I buy the apple stocks grafted the present season, or those one year old from the graft? Which will bear transplanting the best? How far distant the rows? Do the grafts do best set on a slight ridge or level? Is compost directly at the roots at time of setting, practicable, and any other information in the premises will be gratefully received by P. *Salisbury, Ct.*

At current prices, it is best to buy the root grafts, and set them out. But if the one year trees can be had nearly as cheap, it would be best to procure these. The root grafts may be had for $6 to $8 per 1000; if the yearling grafted trees can be had for $10 or $12, they would be the cheapest. The usual price is about $20 or $25. They would all live, while a portion (say 10 or 20 per cent.) of the root grafts do not grow; and the yearlings would be rather the largest at the end of the season. The root grafts must be set on fine, level, mellow ground, nearly to the tip, or with half an inch above ground, and the soil must be packed well about the roots. The rows should be 4 ft. apart. Thoroughly decomposed compost, mixed well with the soil, is useful. Our correspondent better procure Barry's *Fruit Garden*, Thomas' *Am. Fruit Culturist*, and other books on the subject, if he wishes to understand how to manage trees.

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[For the Country Gentleman and Cultivator.]

NOTES ON GRAPES.

L. Tucker & Son—I like the proposition of your correspondent Miner, "to agitate the grape question—good will come of it." So here is my mite. Location north part of Cayuga county, N. Y. Isabella ripened twice perfectly in twenty-two years; Catawba once in same time. Vines killed to the ground at 15 deg. below zero. *Concord* ripe two weeks before the Isabella. Good, and ripens even. Vines stand our winters without protection. Rebecca very good, but not so hardy as Concord. If covered it ripens a few days ahead of the Concord. Diana bears well, is a good grape, and ripens here after Concord and Rebecca, and rather unevenly. My Delawares have not fruited. D. L. Halsey.

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[For the Country Gentleman and Cultivator.]

Winter Management of Dwarf Pears.

In your issue of Jan 9, your suggestions on the winter management of dwarf pear trees, are in accordance with my practice for the last five years, and as you ask cultivators to state their experience, I cheerfully add my mite.

The whole surface of the ground in my fruit-garden, is covered about three inches deep with salt hay during the summer. Just before winter sets in, I remove the hay from the trees, and throw up a mound, some ten or twelve inches high, around the body of the trees, and then replace the hay. I also add some two inches of coarse strawy manure.

In the spring, after the weather becomes warm, the covering is removed, the mound of earth levelled down, and the fine part of the manure, with a little superphosphate of lime, added, and lightly forked in around the trees; the strawy manure and hay replaced, and it is right for another season.

The covering of the entire surface of the ground during our hot, dry summers, answers a two-fold purpose—first, it keeps the ground moist; and secondly, it saves a great amount of labor in keeping the ground *clean*—a very important consideration in the successful cultivation of the dwarf pear.

The result is, I have not lost a tree in the time, or a crop of fruit with the exception of two varieties, the *Bartlett* and *Glout Morceau*, the past season; and they were well set with fruit buds, but *the buds* were all destroyed by the previous severe winter.

Amesbury, Mass. WLILIS P. SARGENT.

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[For the Country Gentleman and Cultivator.]

A Flower Garden for the Children.

The season of flowers, bright and beautiful, will soon be with us. Nothing can be more elevating and ennobling to the thoughts and character of man, than the cultivation of these "waifs of paradise." This is so especially in regard to children, and no one that gives his children a plot of land for a flower garden, will ever have cause to regret it. The expense for seeds is but a trifle compared with the benefit and pleasure that will accrue; while the influence on the minds of the young, in creating a love for the beautiful, and forming habits of industry, cannot be estimated in dollars and cents.

Hoping that many of the youthful readers of the Co. Gent. will make a beginning the coming spring, I will give them a few hints which may be of help to them.

In the first place select a warm piece of land and work it thoroughly so as to reduce it to as fine a tilth as possible, making it rich with rotten manure containing as few foul seeds as possible. The seeds should not be sown till the ground is warm and dry, as the plants will be more vigorous when not stunted in their early stages of growth.

Flowers may be divided into three classes:—Annual, Biennial and Perennial.

The seeds of the first have to be sown every spring, as they grow, blossom and die each year. They are very desirable in a garden, as being of rapid growth, and produce flowers of every hue and fragrance.

Biennials require two seasons to perfect their growth, blooming and dying the second season, while perennials live for many years, or until they die of old age or hard usage.

There is yet sufficient time to make out and procure lists of seeds of each variety, advertised in this paper by friend Norris, or they can be obtained at most seed stores, and when the spring opens, be prepared to make a garden which will please the eye of the passer-by as well as be a source of pleasure to yourself and friends.

ST. LAWRENCE.

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[For the Country Gentleman and Cultivator.]

To Protect Cucumbers, Melons, &c. from Bugs.

After planting, cover them with pieces of glazed cotton wadding, split, so that one piece answers for two hills, placed with the glazed side up, and pinned to the earth with slender smooth pins of wood slanting outwards, to prevent their blowing away.

The plants are thus protected in some degree from excessive cold or heat. It need not be removed. The plants will push through it or carry it away when they begin to spread themselves, and the bugs do not know enough to crawl under it. Perhaps they are repelled by the fibres of the cotton. Chas. W. Badger.

Newark, N. J.

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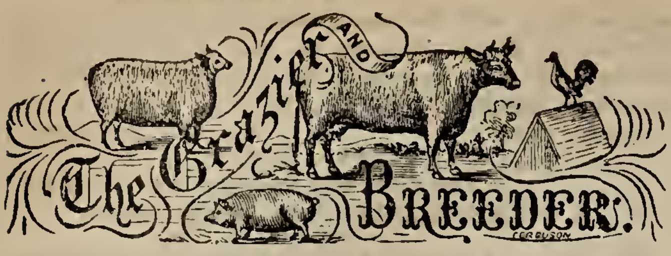
Mice, Rabbits, and Horse-Shoe Tiles.—A neighbor excludes mice from his young trees, by placing two horse-shoe tiles, so as to encase the stem, and then passing a slender annealed wire around, and giving it a twist. This is about as easy a way as the old and effectual remedy of a small smooth mound of earth around each tree, and may be applied after the ground is frozen. It would be hard for the rabbit to gnaw through the tile—if not high enough, a second pair of tile might be placed above, if the tree were stiff. What effect this remedy would have in excluding the borer, may be worthy of a few experiments.



[For the Country Gentleman and Cultivator.]

ECONOMICAL HORSE-FEEDING.

Messrs. Editors—Having a desire to ascertain the manner in which feeding was managed in some of the largest stables in this country, I determined to improve a few leisure hours in examining the system of horse-feeding practiced in the Omnibus and Railroad Stables of New-York. The following are a few of the items gleaned from visiting the stables of the Fourth, Fifth, and Madison avenue omnibus lines, and the Third, Fourth, Sixth, and Eighth avenue railroad lines. These are among the largest and most enterprising corporations of the kind, and a high degree of intelligence is brought to bear upon their management.

In all these stables, cut hay and ground feed, mixed wet, are used exclusively, the experience of many years having convinced the managers that long hay and whole grain are not economical. The two prominent reasons for this belief are, 1st, that a horse requires less of cut and ground feed, and 2d, that less is wasted, both by man in distributing, and by beast in consuming. But facts and figures are the best support of theories, and to these I would refer. In all the railroad and in most of the omnibus stables, the grain consists of corn and oats, in the proportion, by measure, of three of the former to two of the latter; the proportion, however, varying with the relative market value of the two kinds of grain. Let us look first at the

Third Avenue Railroad Stables,

Where are now kept 880 horses, whose average weight is about 1,100 lbs. These horses travel daily 18 miles, while their road, running as it does from the City Hall to Harlem, has the heaviest and longest grades of all in the city. Mr. Meriam, foreman of these stables, stated that although they kept no accurate account of the feed consumed each week, still the whole amount for the year was known, and that from experiments at various times, he believed the average amount consumed by each horse daily to be, of grain 17 lbs., of hay 9 lbs. This company, owing to a recent fire, are laboring under the disadvantage of not being able to grind their own grain. Their new stables, the largest in this country, deserve at least a passing notice. They are of iron, and are 200 feet in width by 600 in length, occupying the whole block bounded by 65th and 66th streets and 2d and 3d avenues. The stalls are 1,200 in number, and four feet in the clear, with iron mangers. Turning next to the

Eighth Avenue Railroad Stables,

We find 600 horses, averaging in weight about 1150 lbs. travelling 20 miles per day. From Mr. Wilson, Asst. Superintendent of the road, I learned that their means of ascertaining the amount of food required daily for each horse were much the same as with the 3d Avenue Road, depending upon yearly results, together with occasional experiments. His estimate for each animal per day, was as follows:—Grain 18 lbs., hay 10 lbs. Without stopping at present to notice any of the conveniences of this company for preparing their feed, we will pass at once to the—

Sixth Avenue Railroad Stables,

Bearing in mind our present special object, of ascertaining how much nutritious food, suitably prepared, is necessary for the support of a hard working horse. And here the observer, whatever may have been his impressions in reference to the good management of the other establishments which we have noticed, is particularly struck with the order and system which, in these stables, are brought to bear for the comfort of the horses and the interest of the owner.

Mr. William Ebbitt, the Superintendent of the Road, attends not only to the duties which devolve upon him in common with other Superintendents, but also exercises a special and personal supervision over the domestic economy—if I may use the expression—of the stables. During the past 10 years he has devoted especial attention to the matter of feeding horses, and, after very many careful and oft repeated experiments, he has at last reduced the subject to a science. As interesting as a recital of these investigations might be, their *results* are what we are at present seeking to gather.

The number of horses fed is 530; their average weight 1,000 lbs.; travelling daily 20 miles. In a book kept especially for that purpose, is recorded once a week the exact amount, in pounds, of hay, corn and oats consumed during the previous week. This record extends back several years, and from it Mr. Ebbitt kindly consented to allow me to make whatever extracts I chose. I accordingly copied the following, commencing with the week ending Dec. 11th, 1859, and making extracts at regular intervals up to Sept. 14th, 1861.

	Dec. 4-11, 1859.	Jan. 12-19, 1860.	March 10-17, 1860.
Hay,	24.069 lbs.	20,323 lbs.	24,328 lbs.
Corn,	390 "	876 "	702 "
Oats,	900 "	402 "	702 "

	June 2-9. 1860.	Sept. 1-8. 1860.	Dec. 1-8, 1860.
Hay,	27,343 lbs.	24,838 lbs.	28,420 lbs.
Corn,	870 "	740 "	865 "
Oats,	390 "	460 "	400 "

	March 2-9, 1861.	June 1-8, 1861.	July 6-13, 1861.	Sept. 7-14, 1861.
Hay,	23.488 lbs.	23,584 lbs.	20,675 lbs.	21,473 lbs.
Corn,	876 "	812 "	600 "	752 "
Oats,	402 "	546 "	325 "	506 "

Carefully averaging the various amounts, we have the following interesting results:

Average am't of Hay consumed, per head, daily,		6 43-100 lbs.
" " Corn " "	11 30-100 lbs.	
" " Oats " "	4 34-100 "	
		15 64-100 "
Total,		22 7-100 "

And reducing this to dry measure, (calling corn 56 lbs. and oats 32 lbs. per bushel,) we have,

Average amount of Corn consumed, per head, daily,	6 45-100 quarts.
" " Oats " " "	4 34-100 "
	10 79-100 "

Or, feeding all oats, we should have as many quarts as there are pounds of grain, viz., 15 64-100 quarts.

To recapitulate, we have,

Third Ave. road, with 1,100 lb. horses, consuming of	Hay, ..	9 lbs.
	Grain,.	17 "
Total,		26 "
Eighth Ave. road, with 1,150 lb. horses, consuming of	Hay. ..	10 lbs.
	Grain, .	18 "
Total,		28 "
Sixth Ave. road, with 1,000 lb. horses, consuming of	Hay...	6 43-100 lbs.
	Grain,	15 64-100 "
Total,		22 7-100 ".

For the discrepancy between the last result and the other two, there are I think, at least four reasons: 1st. The difference in the average weight of the horses; 2d. In the Sixth Avenue road we have *figures* to deal with, while in the other cases we have to depend somewhat upon *estimates;* 3d. Kind and careful treatment, under the immediate and personal supervision of a responsible and interested individual; 4th. The grain for the Sixth Avenue road is ground very coarse—but little more than cracked. This the Superintendent considers easier of digestion for the horses, being less heavy than clear meal, and acting much as coarse bread upon man. In mixing, moreover, with the cut hay, it requires less water than fine meal, and consequently the whole mass is less liable to ferment in warm weather, besides obviating the danger of scouring the horses. Let me here remark that there is no perceptible difference in the condition of the horses upon these three roads; all are in good flesh.

The Eighth Avenue road do all their own cutting and grinding with a 15-horse power steam engine, working

COMPARATIVE WEIGHT OF WOOL AND CARCASS.

Sweet Brothers' flock of 180 Sheep of several grades, half to three-quarter Spanish Merinos—a portion of the largest, quarter French Merino. The base of the flock but a few years since was Saxony. Sheared on the 26th and 27th of June, 1861. Every sheep and fleece was weighed separately, and recorded on the spot.

Table—*Classified by age, except 4-years old, which are subdivided by sex. The 4-year old Ewes all had Lambs, and thirty-five of them raised their Lambs.*

Number in Class.	Age--years.	Sexes.			Gross weight.	Weight of carcasses.	Weight of wool.	Average weight of carcass.	Ave. weight of fleece.	Pounds of carcass to 1 of wool.	Per cent. of wool to gross wt.
		Ewes.	Weth'rs	Bucks							
32	1	19	11	2	2,160.25	1,991	169.25	62.21	5.28	11.11	7.83
30	2	15	14	1	2,508.37	2.347	161.37	78.23	5.37	13.98	6.43
51	3	9	42	..	5,013.25	4,700	313.25	92.15	6.14	14.10	6.24
26	4	..	25	1	2.921:13	2,736	185.13	105 11	7.12	14.76	6.33 } 5.58
41	4	41	..	..	3,738.	3,557	181.	86.75	4.41	19.65	4.84 }
Total,. 180	1 to 4	84	92	4	16,341.	15,331	1,010.	85.17	5.38	15.17	6.18

Table—*Classified by Weight, in divisions of ten pounds each.*

Number in Class.	Weight of divisions.	Sexes.			Gross weight.	Weight of carcasses.	Weight of wool.	Average weight of carcasses.	Ave. weight of fleece.	Pounds of carcass to 1 of wool.	Per cent. of wool.
		Ewes.	Weth'rs	Bucks							
5	42 to 51	5	..	..	256	234	22	46.80	4.40	10.63	8.59
14	50 to 61	10	4	..	871	803	68	57.35	4.85	11.80	7.80
20	60 to 71	14	6	..	1,427	1,320	107	66.	5 35	12.33	7.49
34	70 to 81	21	12	1	2,742	2,567	175	75.50	5.14	14.66	6.38
39	80 to 91	19	20	..	3,566	3,355	211	86.	5.41	15 87	5.90
34	90 to 101	11	22	1	3,453	3,252	201	95.64	5.91	15.42	5.82
18	100 to 111	4	13	1	2,016	1,905	111	105.83	6.16	17.16	5.60
11	111 to 121	..	10	1	1,353	1.273	80	115.72	7.27	15.91	5.89
5	120 to 134	..	5	..	657	622	35	124.40	7.00	17.76	5.32
Total,. 180		84	92	4	16,341	15,331	1,010	85.17	5.38	15 17	6.18

four mills and two hay-cutters, and running only two days each week. Original outlay for engine, boiler, &c., $3,000, to which add fuel, and wages of engineer at $50 per month, besides occasional slight repairs, and you have the whole expense of motive power.

The Sixth Avenue road work one mill and one hay-cutter with a 4-horse circular power, running most of the time. The capacity of the mill (Prentiss & Page's) when Mr. Ebbitt commenced using it, was eight bushels per hour, with 300 revolutions per minute. By increasing the number of leading and "straw furrows" in the stone, thus getting greater cutting surface, and by grinding coarser, he now, with 160 revolutions per minute, grinds 30 bush. per hour. By enlarging the spout and boring auger-holes in the corners of the box, thus cooling the whole mill and allowing the meal to come out almost entirely free from warmth, he avoids "shrinkage."

The capacity of the hay-cutter (Daniel's) is about 12 cwt. per hour. The same cutter is used in the other six establishments which I visited, and is generally worked by a one-horse railway-power. In the Third Avenue road, however, in addition to this machine, they are trying one of Hickok's Hay and Cornstalk Masticators. The average life of an omnibus horse is about three and a half years; of a car horse about four years. H. W. C.

White Plains, Westchester Co., N. Y., Feb., 1862.

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CURE FOR BLOODY MURRAIN.

One teaspoonful of saltpetre, one tablespoonful of salt, one tablespoonful of sulphur—well pulverised and mixed together. One dose has never failed to cure my cattle if taken in time. Francis Perry.

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☞ The big **Sanderson Ox**, several times noticed in our columns, recently sold to Bryan Lawrence of New-York, has been slaughtered and weighed in that city. "The live weight a day before he was slaughtered, was 3,300 pounds. The dressed animal weighed 2,473 pounds, or 154 pounds more than the celebrated ox "Union," and exceeded any ox ever slaughtered in this or any other country."

[For the Country Gentleman and Cultivator.]

Comparative Weight of Wool and Carcass.

Eds. Country Gentleman—I send you herewith two tables, giving the weight of carcasses and wool of a flock of sheep owned by the Sweet Brothers of the town of Pompey. (See tables above.)

At my request Messrs. Sweet took the trouble to weigh each sheep and the wool it bore, and to classify and arrange the whole matter in the tables. I have long thought that as it was the surface of the sheep we wool-growers derived our income from, it was a mistake to try to raise large sheep for the production of wool.

The principle involved I think is this: The yield of wool is in proportion to the surface sheared, while the sheep consumes food in proportion to the weight of the animal. This, I think, is the general rule—not true of every individual sheep, but true when applied to flocks. We know that two sheep weighing 150 pounds, have more surface to bear wool, than one sheep that weighs 150; and if a man has a flock of 100 sheep that weighs 10,000 pounds, and another man has a flock of 133 sheep that weighs 10,000, the food required will be the same, (according to the German experiments,) while the wool of the 133 sheep will be 638 pounds, and the wool of the 100 sheep will be only 570, as deduced from the tables of Messrs. Sweet.

I have sent a copy of these tables to Hon. Henry S. Randall, and I presume they will appear in his essay on fine-wooled sheep in the next volume of the Transactions—but I desire to bring them before the public through your paper at once, to induce, if possible, at least some flock-owners to take the trouble to weigh each sheep and its produce at the next shearing, that the tables may be so multiplied that we may deduce the truth.

If the food that sheep consume could be weighed here, as it has been many times in Germany, the whole truth might be arrived at. Geo. Geddes.

Fairmount, N. Y., Feb. 26, 1862.

[For the Country Gentleman and Cultivator.]

HOW TO RAISE CALVES.

Some think a good calf cannot be raised unless allowed to draw the milk itself from the cow. But my mode of treatment is to let the calf remain with the cow until about four days old; then to put him by himself, and teach him how to drink, commencing with skimmed milk twelve hours from the cow. As the calf grows older, the milk is allowed to stand longer. They will soon get so as to take it readily at any age up to as long as you wish to let it stand, and will grow finely if properly attended to. We warm the milk until the weather gets warm, and then give it cold. They should be tied up, and each calf fed by himself, as some will drink much faster than others. Give a little fine hay daily as soon as they will eat, and keep them up from grass until two months old, when they can be let out into a small lot, and allowed to feed themselves from grass if desired. I think I can make nearly as good calves in this way as by letting them go with the cows, and I am sure it is much cheaper, as I never allow the calf to interfere with the amount of butter after he is one month old. Last season we fed a little oil-cake meal with the milk, and think it very good as it prevents them from scouring.

I will give you the weight of one calf raised last season to show you how they can be made to grow on this treatment. She was a heifer calf, fed nothing but skimmed milk, buttermilk and hay, until cold weather late in the fall, when the cows began to dry up; we then commenced feeding a little corn meal ground in the ear, beginning with a small handful a day and increasing a little daily until the last month; during January fed her four quarts daily, and had her slaughtered first of February at about eleven months old. Her dressed weight, four qrs. hide and tallow, after hanging 24 hours, was 501 lbs.; tallow rough 25 lbs.

We have a shed with stanchions where the calves are fastened and fed in pails by themselves; they will very soon learn to take their places at feeding time. Care should be taken when calves are young not to feed too much. You ask what roots I have raised and what ones I consider best adapted to the wants of milking cows. I think carrots and sugar beets the best adapted to their wants, but I have never experimented with either sufficiently to give a detailed statement of their relative merits. I have a very favorable opinion of the sugar beet from what I have used of them.

Chenango Co., Feb. 9, 1862. JOHN SHATTUCK.

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[For the Country Gentleman and Cultivator.]

WORMS IN THE WIND-PIPE OF SHEEP.

EDITORS OF THE CO. GENT.—In November I noticed some of my sheep had a cough, but did not consider it anything more than a cold, which would soon wear off.

Gave them plenty of tar and salt; still the cough hung to them; at times it was very violent and some of the lambs were troubled in the same way, and all that were attacked lost flesh, although fed all they wanted to eat and drink, with good shelter and care. Three sheep that were the worst, I separated from the rest, and gave them an extra quantity of grain, thinking to fatten and kill them, but they grew poorer in spite of all my care and attention. Yesterday morning I found one of them dead; took her hide off and opened the wind-pipe with my knife from gullet to brisket, and found my suspicions as to the cause were correct, viz: worms in the wind-pipe; the largest one I found was about the size of a cambric needle, nearly 3 inches in length, and perfectly white. Others could be seen by close watching, working about in the phlegm (of which there was considerable,) which were not more than 1-16th of an inch in length, and so small they were scarcely discernible. Doubtless I should have found more in the lungs had I examined there, but I had not the necessary instruments with me at the time. The worms were working in every direction, which I presume caused tickling in the throat and produced the cough.

"There is no great loss without some small gain," for I have a good pelt and know the nature of the disease. Now if any of our sheep raisers can give us a remedy, let it be published in the Co. GENT., and I shall consider myself the gainer, and it may be a benefit to some others.

"Brace Farm," Oswego, N. Y. J. P.

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[For the Country Gentleman and Cultivator.]

WINTERING PIGS ON HAY.

MESSRS. EDITORS—It may not be generally known that pigs during the winter will not only eat clover hay that has been cured in good condition, but will actually thrive upon it.

I have seen a lot of 25 shoats (Sept. pigs,) the present winter, which have been fed on clover hay alone, and they are in good flesh; in fact they are actually in better condition than the average of pigs wintered without good warm shelter, and fed upon grain.

The clover fed these pigs was cut on the 4th day of July, and secured without a drop of rain upon it, and of course is very nutritious; the pigs in addition, are supplied with warm, comfortable quarters, and have at all times access to warm spring water.

I once had a neighbor who owned a noted sow, to which he never fed a mouthful of grain during the winter, but kept her in the yard with his cattle, and she ate with them the hay, and throve upon it.

Now, I do not advocate this method of wintering swine; I simply give the facts—others can try it for themselves. K. *Wilson, N. Y., Feb.* 1862.

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[For the Country Gentleman and Cultivator.]

CHAFFED CORNSTALKS AND HAY.

There seems to be a great difference of opinion among practical farmers as to the economy of chaffing hay and stalks for horses and cattle; yet repeated experiments of late in England and Scotland, have proved that nineteen pounds of chaffed hay will take the place of twenty-five pounds in the long state. That this theory is true, is shown by the practice of all the large omnibus and railroad-stable proprietors in the city of New-York, as well as in most of the livery stables in New-England. In New-York the average weight of finely cut hay fed daily to each horse is only about nine pounds, the same being treated wet, with about seventeen pounds of ground corn and oats, the proportion being two of corn to one of oats, when oats are dear and corn is cheap.

If it is thus a saving of more than one-fourth the hay when fed in the cut state, there must be a much greater saving in finely cut stalks, the butts of which are otherwise inedible. It is true that the stalks contain much less nitrogenous matter than well cured hay, yet if cut as soon as the corn is glazed, and well stooked, they contain much sugar, and the extra carbon is as good to form animal warmth and respiration as that of the mos tnutritious hay; and when finely cut and treated with meal, they are as greedily eaten by both horses and bovines. Then the manure made from finely cut stalks, is mechanically well fitted as a top-dressing to meadows, or for mulching the wheat plants to prevent their freezing out,—which cannot be easily done with coarse stall manure.

In the GENTLEMAN of the 27th ult., that astute farmer, JOHN JOHNSTON, says he tried cornstalk chaffing one year, but found it did not, with him, pay the labor. This is doubtless true where labor is dear and hay is worth only five or six dollars a ton in the stack, as it generally is in Mr. Johnston's vicinity; but where hay is from twelve to fifteen dollars the ton, with stalks in proportion, and Indian corn from the Western prairies cheap, the saving of hay and stalks by fine chaffing must be good economy if labor is not too dear. S. W. *Waterloo, N. Y.*

STATISTICS OF HON. Z. PRATT'S *Dairy Farm for the usual season of about eight months, for the years* 1857, 1858, 1859, 1860 *and* 1861—*Fifty Cows of what are called native breed, being kept each year:*

MILK.

	1857.		1858.		1859.		1860.		1861.	
	In lbs.	In. gals.	In lbs.	In gals.	In lbs.	In gals.	In lbs.	In gals.	In lbs.	In gals.
Whole Product, ...	254,736	31,842	260.450	32,556¼	240,700	30,087	217,736	26,276	227,757	28.301
Average per cow,......................	5,094.48	636.31	5,209	651.12	4,814	601.74	4,354.75	525½	4,555	572.26
Average per day,.......................	1,044	130½	1,067½	133.4	982½	122⅔	888.72	107.28	876	108.85
Average per day for each Cow, ...	20.80	2.60	21.30	2.70	19.65	2.45	17.77	2.14	17.5	2.17
Greatest av. in one day per cow,...	24.18	3.25	31.50	3.31	28.35	3.53	25.60	3.40	26.7	3.3

BUTTER.

	1857.		1858.		1859.		1860.		1861.	
Whole Product, ...	6,500 pounds.		8,050 pounds,		8,300 pounds.		9,143 pounds.		10,860 pounds.	
Average per Cow, ...	130 do.		161 do.		166 do.		182.86 do.		217.20 do.	
Average per Day,......................	26.61 do.		33 do.		33.92 do.		37.72 do.		41.76 do.	
Average per day per Cow, ...	8.50 ounces.		10.56 ounces.		19.84 ounces.		11.94 ounces.		13.36 oz.	
Average milk to 1 lb. Butter,........	39.20 lbs. or 20 qts.		32.33 lbs. or 16.16 qts.		29 lbs. or 14.50 qts,		23.30 lbs. or 11.20 qts.		21 lb or 10.42 qts	
PORK:—	Per Cow.	Total.	Per Cow.	Total.	Per Cow.	Total.	Per Cow.	Total.	Per Cow.	Total.
PORK MADE in pounds,...............	92½	4,627	148	7,403	129	6,455	130.3	6,516	132½	6,625
SALES:—										
Butter sold,............................	$30.95	$1,547.54	$38.48	$1,924.02	$41.40	$2,070.00	$42.97	$2,148.89	$49.91	$2,497.80
Pork sold, ...	6.56	328.16	8.42	421.08	8.36	418.00	9.12	456.12	6.62	331.25
Calves sold,...........................	....	....	....	....	....	....		80.00		38.65
Total,....................................	$37.51	$1,875.70	$46.90	$2.345.10	$49.76	$2,488.00	$52.09	$2,685.01	$56.49	$2,867.70
Exp. for work'g farm over proceeds of same. not enumerated above, including $700 for each year, for interest on investment for farm and stock, $10,000, ...		1,415.50		1,380.50		1,550.00		1,125.75		1,150.75
Net profits above interest, ...		$460.20		$964.60		$938.00		$1,559.26		$1,716.95

PRODUCT OF COL. Z. PRATT'S DAIRY.

We recently gave a little account of Col. ZADOC PRATT's Dairy Farming, together with some hints of a practical nature derived from the methods there adopted, —promising a statement in detail as to the products obtained. Such a statement, covering the past five years, will be found in the accompanying table. It shows a constant and gratifying increase in the amount of Butter annually made per cow. We should be glad if the same desire to do better and better from year to year, was more generally exhibited, and if the same careful record of the results accomplished, was more generally preserved. In these two respects, particularly, this table is worthy of careful examination.

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ANOTHER CHEESE APPARATUS.

MESSRS. EDITORS—Noticing an article in the fifth number of the present volume of the Co. GENT. in answer to a correspondent's inquiry, recommending a cheese vat as equal if not superior to any in use in this State, and that if any one has a better, you would be glad to hear from them, I will avail myself of this opportunity to recommend to your correspondent and cheese dairymen, an apparatus called the "Empire Dairyman," invented, patented, and manufactured by Messrs. Redington & McCluer of Fredonia, Chautauqua Co., N. Y., which I think superior to the Oneida cheese machine, the milk being heated on an entirely different principle. It heats more uniformly. The heat is distributed through the water vat in such a manner that the temperature of the milk is raised gradually, and no part of the milk is raised above a point which will injure the oily portion of the milk. The heat can be turned on or off at pleasure, simply by giving a lever about a quarter turn. This apparatus has been in use for three years past, and it is the only one now sought for by the dairymen in this vicinity. This apparatus is also manufactured at Utica, Fort Plain. and Cooperstown, N. Y., and Richmond, Vt.

Feeling as I do, a deep interest in the dairyman's welfare, as I am one myself and well acquainted with the cares and perplexities of dairy-farming, I earnestly recommend the "Empire Dairyman," for I believe it an improvement, and that more and better cheese can be made by it than by any other with which I am acquainted, from the same quantity of milk. If I am wrong I would like to be convinced of my error, because I want the best in use, all things considered. DEXTER H. GOULDING.

Sheridan, N. Y., Feb. 10, 1862.

[An advertisement of the "Empire Dairyman" appeared in the Co. GENT. for Feb. 20, and in the CULTIVATOR for March.]

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[For the Country Gentleman and Cultivator.]

New Process of Cheese-Making.

RESPECTED GENT.—I have been thinking of addressing a few lines to you ever since "SIGMA'S" last appeared in your columns—"the more by token," (as Bridget says,) that I have discovered thereby who "Sigma" is—a question which has puzzled me for some time. I desire to thank him for his compliment to my housewifery, of which I entertain much the same opinion expressed by an excellent old lady in our neighborhood, when some encomiums were passed upon her piety in her presence—that she "did not feel as if she had any to boast of, and the less said about it the better." You will perceive I am the person to whom "Sigma" alluded, who practiced upon the "Important Experiment in Cheese-making," (vol. 17th, page 175,) and "Remarks on Cheese-making," in the next No. It was my first experience in the manufacture of cheese from a dairy of 27 cows,—was entirely successful; every cheese cured perfectly and without any trouble—all were rich and well flavored. I was repeatedly admonished by the "wise ones" that I should spoil my cheese if I did so and so, or omitted to do this or that; to all which I resolutely replied, that I was trying experiments for my own satisfaction, and was determined to act quite independent of all pre-conceived opinions in the matter. I consider those hints and directions invaluable, and shall follow them closely hereafter. I cured my cheese in a dry, well ventilated cellar; the process was probably slower than it would have been in an upper room, but good judges say the cheese could not have been better cured.

Swanton, Vt. DORCAS.

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[For the Country Gentleman and Cultivator.]

BUTTER MAKING.

EDS. CO. GENT.—I have kept the past season ten cows and one heifer, from which I have made 2,222 lbs. of butter, (being an average of 202 lbs.,) besides the milk used in a family of seven persons. The cows calved in April and the fore part of May. They were grade Durhams from one-fourth to one-half breeds from the stock of Jonathan Talcott, aged from 3 to 11 years. Their pasture was mostly red clover, with some timothy and white clover mixed, situated on very dry ground, and which was fed pretty close most of the time. The water for them was raised by a pump. This might not be considered a very large yield, but in view of their keeping I think was very good, as they had *nothing but grass* in summer and *corn buts* and straw for the first four months, and hay the remainder of the foddering season, without roots or meal.

Will some one who has had experience, state in the Co. Gent., at what age cows are the most profitable for milk—also whether cows fed on pastures situated on dry ground will produce more milk or that of better quality, than those fed on moist pasture lands?

Rome, N. Y., Feb. 20th, 1862. A. B. BROWN.

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[For the Country Gentleman and Cultivator.]

A CORTLAND COUNTY DAIRY FARM.

Cortland Village, N. Y., March 21, 1862.

Eds. Co. Gent.—I cut the following communication from the Cortland County Republican, exhibiting a good specimen of Cortland county dairying and farming. I know Mr. Sawyer well, (he worked my farm a year,) and I know his statements do not require to be taken with any allowances for exaggeration or error.

HENRY S. RANDALL.

I noticed in your paper a few weeks since a statement made by Mr. Shattuck, of Chenango county, respecting the amount of butter made by him last year, and the profits of his farm for that time. Feeling a little pride in the reputation of our own county, I send you the following items:

I have kept during the past year six cows, and have made 1,550 pounds of butter. You will see that this is an average of 258½ pounds to a cow. My cows ate nothing but grass during the grazing season. I gave them no extra food whatever.

My pork amounted to $37.50. My calves and deacon skins to $16. Allowing the same price for my butter at which Mr. Shattuck has estimated his, and the average income of my cows will be $66.60. As his average is $55.92, I have exceeded him about $10. My farm contains forty-four acres, including three acres of woodland.

In addition to the avails of my cows I have raised in the past year

20	tons of hay, estimated at	$120.00
80	bushels of corn, do.	40.00
60	do. rye, do.	33.75
130	do. oats, do.	36.50
27	do. wheat, do.	30.00
12	do. peas, do.	12.00
50	do. potatoes,	12.50
		$284.75
	Add the avails of cows, as above,	399.60
	Total avails of 44 acres,	$684.35
	Average income per acre,	15.55

Cortland, March 14, 1862. Russell Sawyer.

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[For the Country Gentleman and Cultivator.]

OUR BUTTER PRODUCT---1861.

Messrs. Editors—I have no large story to tell, but thinking that perhaps a brief account of our butter making operations the past season might prove interesting, have collated them for your readers. I gather the items from diary, cash book and memory, as I have not, as some years, kept a regular account with our cows.

We have milked three cows a part of the past season, selling the calf of the first one May 16, previous to which time (from April 9th) it had all the milk of the cow. Received $2 for the hide and one-third of the veal, retaining the balance for home use. Began to use the milk of the other cow May 30th. Had but little milk from the two year old heifer until the 1st of August, when we weaned her calf, then four months old. This heifer had very small teats, which rendered milking difficult, and we thought perhaps the calf could do it most economically.

No account has been kept of the entire product of butter, but only of that sold. We used milk, cream and butter for a family of six persons, not counting "the baby," and laid down a sufficient supply to last until the 1st of April, by which time we hope to make butter again. We also furnished the milk for two 18 pound cheeses for home use, making these in September.

The sales of butter from June 15th to the close of the year amount to 250 pounds—the cash received therefor, $28.45. About 30 pounds was sold for 11 cents, 80 pounds for 10 cents, 50 pounds (in Dec.) at 15 cents, and the balance at 12½ cents. Though butter, for a considerable part of the summer, was as low as 8 and 9 cents, we were so lucky as to find customers for all we sold at 10 cents, and usually got a cent above market price when there was any "briskness" of demand.

Had the whole product of the cows been turned into butter, we should, including that used in the family, have had at least 100 pounds more—not a bad result, considering the treatment of the cows, and the time they were in milk. They had pasture and a quart or two of bran and meal per day when brought up to the yard on the setting in of winter. With better feed they would have been more profitable, but butter making is only a secondary consideration on A. S. B.

Maple Hill, Jan., 1862.

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[For the Country Gentleman and Cultivator.]

Cheese Poisoned by Painted Tubs.

To those cheese makers who still use a *tub*, a word of caution may be of use to those who have painted their tubs during the winter. A case came to my notice a few years since, where a party of gentlemen had lunched on crackers and cheese, seven of whom were soon taken sick—vomiting incessantly and suffering great pain. Physicians were called and all recovered. It being a clear case of *poisoning*, I was called upon to investigate the case, and the following fact was elicited:—"The tub used in the process of cheese-making had been newly painted—did not dry well, and was two or three weeks in getting cleaned off." We were all satisfied that the poisoning was from lead paint. I doubt if many of the readers of your paper use a tub, since the superiority of the vat with heater attached, is so universally acknowledged, yet this caution may be of service. D. *Oneida Co., N. Y.*

Town Union Agricultural Association of the County of Albany.

The adjourned meeting of the above Society was held at the house of Samuel R. Wayne, in the village of New Scotland, on Saturday, the 8th of March, 1862. The meeting was largely represented by the Agriculturists, Horticulturists, and Manufacturers of the county.

The Chairman called the meeting to order, and read the minutes of the last meeting, and stated the objects of this. The Secretary then read the articles of incorporation, constitution and by-laws, as presented at the last meeting, made in accordance to the provisions of an act of the Legislature, which were unanimously adopted by the meeting. On motion, the Secretary of the meeting was appointed Treasurer pro tem., when a large number became members.

On motion of A. Van Auken, Esq., the Chair appointed a committee to nominate permanent officers for the ensuing year. The following officers were then elected:

President—Jurian Winne, Bethlehem.

1st Vice President—James W. Jolley, Coeymans.

Vice Presidents—Henry J. Devoe, Bern; Robert Taylor, New Scotland; Dr. P. B. Noxon, Watervliet; Peter Shaver, Guilderland; Charles Bently, Westerlo; Geo. W. Durant, Rensselaerville; Stephen Marcelus, Knox; Luther Tucker, Martin Hallenbeck, and George Young, Albany.

Treasurer—Wm. H. Slingerland, Bethlehem.

Secretary—Samuel C. Bradt, Albany.

Directors—David Callanan and Henry Creble, New Scotland; L. G. Ten Eyck and John Sloan, Bethlehem; Judge A. Osborn, Watervliet; Alex. E. Willis, Coeymans.

THE CULTIVATOR.

ALBANY, N. Y., APRIL, 1862.

☞ The fourth annual convention of the New-England Cattle Breeders' Association was held at Hartford last week Wednesday, Paoli Lathrop, of South Hadley Falls, President, in the chair. The Treasurer's report showed a balance of $232 on hand. Probable indebtedness, $125. The election of officers resulted in the choice of the following:

President—S. W. BUFFUM of Winchester, New Hampshire.

Vice Presidents—R. Linsley of Meriden, D. Buck of Windsor, Ct., Milo T. Smith of Northampton, Mass., C. M. Pond of Hartford, Conn., H. H. Peters of Southboro, Mass.

Secretary and Treasurer—Henry A. Dyer of Brooklyn, Ct.

M. DYER from the committee on the publication of a herd book, reported "that it would be necessary to provide ways and means for the expense of printing and binding. If 900 entries were made, and 50 cents each were paid as the resolution of publication provides, the revenue would amount to $450, while the book could be published for $400, the edition to consist of 500 copies. Six hundred such entries are already made, of which 212 are Ayrshires, 187 Devons, and 200 Short-Horns." The question of imparting more of a *national character* to the labors and sphere of the Association, was incidentally discussed; and it was finally decided to permit non-members to enter Pedigrees by paying 50 cents for each animal on the record, and $2 for a copy of the book. Resolutions were also passed to amend the constitution so as to fix the price of membership at the annual payment of one dollar, and to extend the privileges of the Association to all breeders of thorough-bred neat stock in the United States and the Canadas. Those desiring to have the pedigrees of their stock entered in the proposed Herd Book can address Mr. Secretary DYER as above.

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☞ We have to chronicle another considerable shipment of AMERICAN SHORT-HORNS TO ENGLAND. A private letter from a friend in New-York, received just as we go to press, mentions that "Lord Oxford," from the herd of SAMUEL THORNE, Esq., "Duke of Geneva" from that of JAMES O. SHELDON, Esq., also two cows and young calves from Mr. RICHARDSON, sailed for England on Saturday last in the steamer Washington, under charge of Thomas Galbraith who went out with the former shipment.

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☞ In another column we give a valuable statement from MILTON CONARD of West Grove, Pa., upon the manufacture of SUGAR FROM THE SORGHUM, by means of Cook's Evaporator. Mr. CONARD sends us a sample of the sugar, a light yellow in color, moist, without any unpleasant taste to betray its origin—indeed in all respects a better sugar, as we should think, than is ordinarily seen upon the tables of working people throughout the community. We received last month a letter from a friend in Philadelphia, which we intended earlier to have noticed, asking our attention to the importance of encouraging the manufacture of Sugar from the Sorghum—at least of publishing the most successful means and experiments in accomplishing this purpose—urging that in no other way could so great good be done as by placing this knowledge within the reach of our readers and of the Agricultural public at large.

Mr. CONARD has taken the agency of Cook's Evaporator, as will be seen by our advertising columns, and speaks of its successful operation with the same praise which we have uniformly heard from those who have tried it in making Sugar either from the Maple or the Sorghum. We are sure that our readers would be interested in a series of articles from his pen, embracing those details to which he refers at the conclusion of his present communication—in fine, all the information which from his own experience he thinks most requisite for the wants of new beginners. As the time of sowing the seed is drawing near, it is quite necessary that the attention of farmers should be given to the subject at once; and if several in the same neighborhood could combine for the growth the coming season of an experimental crop, say of two or three acres each, and for the purchase of a single Evaporator for the use of all, the outlay required would not be very great, and from present indications, there could certainly seem to be no room for loss. According to the figures of Mr. CONARD, we calculate that the size of Cook's Evaporator to which he refers, would be of capacity sufficient in 60 working days between the 15th September and the last of November, to work up the produce of about 25 acres of Sorghum, averaging a yield of 175 gallons syrup per acre.

The subject is one well worthy of discussion, and in inviting farther details from Mr. CONARD, we should also be glad to learn from our friends in the West their conclusions from past experience, and as to the prospect of the sugar manufacture the coming season with respect to extent and to the modes that are to be employed.

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MANURING IN AUTUMN AND SPRING.—EGBERT CARY, present superintendent of Friends' Academy, at Union Springs, gives us the result of an experiment performed with applying manure to sod land in autumn and in spring, before inverting the sod for a crop of corn—and showing the great superiority of the autumn application.

A field which had been a meadow for five years, was divided into lands of seven paces each in width, and was 45 rods long. The grass was chiefly timothy, with a portion of clover. To six of the lands, barn-yard manure, that had rotted in the yard during the summer, was applied early in autumn, after the removal of the grass crop, at the rate of 13 two-horse loads per acre. It was at once well spread. Its effects were very visible by the fine green grass through the autumn. It was plowed just before freezing. A few more lands were manured at the same rate, in winter, but the manure was left in heaps, so that the effects were really the same as if it had been applied in spring. A part was yard manure, and a part from the hog-pen. It was spread and plowed under about the time that farmers usually begin to mellow their soils for corn; and the whole was planted. The yard manure spread in spring, produced no perceptible superiority in the growth of the corn, over that grown on the few lands that were left unmanured. The hog-manure, also applied in spring, showed an improvement just perceptible. But on the land manured in autumn and with yard manure, and where the fertilizing portions had been soaking all the autumn and a part of the winter into the soil, and thus becoming intimately diffused, the growth of the corn was greatly superior to the rest of the field; the result was very distinct and conspicuous.

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☞ We are pleased to learn from Dr. EVAN PUGH, President of the Pennsylvania Farm School, that that institution is now in a flourishing condition; about ninety students have already entered, and more are expected. The new buildings will be completed, it is anticipated, by next August.

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☞ We have received a small sample of Sugar made by JAS. M. MOSS of Iowa, from the *Imphee*. He thinks he has discovered the way to dry it enough without burning, to make it grain or crystalize. It is the first sample we have seen, we believe, from this kind of cane, and is of very fair appearance and quality.

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A FAST SHEEP.—We have a young ewe that dropped her first lamb Dec., 1860, and lost it; dropped another in June, 1861, and raised it, and now, Jan., 1862, has another by her side, thus making three lambs in about thirteen months—pretty well for a new beginner. M.

☞ Four Hundred Correspondents of the Mark Lane Express contribute to that journal of the 17th of February, returns as to the yield of the crops of 1861 in 38 counties of England. The following result will give our readers an idea of the productiveness per acre in that country, in a season which only one hundred, or one-fourth of the reporters, consider equal to or above an "average," while the other three-fourths characterize it as "under average," many of them rating the deficiency at from one-fifth to two-thirds:

Average Yield per Acre in 1861 *of Thirty-eight English Counties.*

Of Wheat,	29 bushels.	Of Barley,	37¾ bushels.
Of Oats,	46½ do.	Of Beans,	32½ do.
Of Peas,	30 bushels.		

The total average wheat crop of England one year with another, is rated at about nineteen millions of quarters, and the average importation at five millions, equivalent to an annual consumption averaging twenty-four million quarters, or 192,000,000 bushels. The actual yield of wheat in 1861 is put down at about 108,345,000 bushels. Consequently we have:

Estimated comsumption to be provided for,	192,000,000 bushels.
Estimated crop of 1861,	108,345,000 do.
Deficiency to be imported,	83,655,000 bushels.
Of this amount there had been imported up to February 1st (and not re-shipped elsewhere) about,	20,000,000 bushels.
Leaving a further supply to be required, of,	63,655,000 bushels.

Say sixty millions of bushels of wheat to be imported between the first of February and first of September, when the new crop there will be available—or eight millions of bushels, or more, per month.

This does not look as though our grain markets would flag before the next harvest comes in; and it is fortunate indeed for us, both individually and nationally, and for the peace and welfare of the world, that we have the wheat to supply. When navigation opens our shippers may look for busy times again.

And we most sincerely hope that the Farmers of the Great West will not suffer themselves to be discouraged by present low prices from sowing a good breadth to spring wheat the coming season. We suppose the character of the past winter has been generally favorable for winter grain; and as soon as an intelligent opinion can be formed of its prospects, we hope our readers will communicate their character for publication in the COUNTRY GENTLEMAN.

◆

☞ The question of the legality of "Trials of Speed" on Agricultural Show Grounds in this State, has at last come before the courts for decision. It appears that a Mr. Seymour brought an action in a Justice's Court at Rochester to recover the amount of a premium offered by the Monroe Co. Agricultural Society, at the "Horse Show" in June 1861, which was alleged to have been won by a Mr. Storey, and by him assigned to Seymour. The plaintiff gained his suit before the Justice, and the Society appealed. The ground of refusing payment was that the offering of a premium for a trial of speed between horses was contrary to law. (2 Rev. Stat., 5 Ed., 932, § 49.) Judge CHUMASERO, before whom the question came on appeal, has decided that this view of the case is correct,—stating, in his written opinion, in substance, that "if it be claimed that offering a premium is not a bet, stake or wager, no different result can be reached, for the statute first quoted makes the offering of any reward for speed, a misdemeanor, and no valid contract can be predicated upon a violation of law. At any rate, a contract made in contravention of the policy and spirit of the statute is equally void with one made in violation of its express provision. It was evidently the intention of the Legislature to suppress *every species* of bet and wager.

"In reply to the objection that the result to which he arrives will be to cripple or destroy the usefulness of such associations, the Judge remarks that the utility of any Society must not be made to depend upon violations of the law of the land. He doubts whether in the original formation of these Societies, horse-racing was considered essential to their prosperity or success. The practice seems to have been recently engrafted, and it is equally censurable with other horse-racing. In his judgment, it tends to develop and encourage a taste for gaming. If the Monroe County Society needs greater powers than it now possesses by law, let an application be made to the Legislature for them. Until that is done the Court must take the statutes as they are. The judgment of the court below is reversed."

◆

WILLOW FOR WESTERN TIMBER.—Our Western subscribers frequently inquire for the best timber trees to plant. We observe in the late proceedings of the Illinois Horticultural Society, as published in the Prairie Farmer, that the Gray or Powder willow is strongly recommended. From the report of a special committee on this willow, we learn that this is the same willow that Dupont uses in the manufacture of powder—that it grows with great vigor, producing trees 15 to 20 feet high in three years. It grows freely from cuttings, with scarcely a failure, and in seven to ten years will make trees large enough for three rail cuts, the first making four rails, the second two, and the last a pole. These rails will last thirty years, if kept off the ground; and cutting in summer instead of winter, will of course greatly increase their durability.

◆

☞ In our recent notes at Mr. TAYLOR's South-Down Farm, Holmdel, N. J., we were inadvertently misinformed as to the amount of oats given to the full grown rams. In a subsequent letter from Mr. T. he says: "I think I must have told you *one pound* per day, as that was the quantity on my mind when feeding last night, but in calculating I find that I should have said *one-half pound*. The reason I did not call it *one pint* per day, is that very often our Jersey oats do not weigh over 28 lbs. per bushel, in which case a pint is not enough; so I give half a pound, which is equivalent to one pint per day when oats weigh 32 lbs. per bushel."

We also learn—although this information was not intended to appear in print—that subsequently to the time of our visit, up to the 20th inst., thirteen of Mr. Taylor's ewes had lambed, *eight of them bringing twins*—thus making twenty-one lambs, all of them, with the exception of one pair of twins, sired by "No. 89," and 17 out of the 21 being ram lambs. Mr. T. appears to be much pleased with the first evidences he now has before him, of No. 89's stock-getting merits, and thinks that his great vigor and activity may have had a decided influence in controlling the sex of his offspring.

◆

☞ We are indebted to Col. JOHNSON for a letter on the "Illinois Coffee," of which so much has been said lately, by Dr. WARDER of Ohio,—published in another column. The plant referred to proves, it will be seen, to be no more than a sort of Vetch, and Col. J. remarks: "We have an abundance of *Peas* already in the Coffee trade, and do not desire to increase the propagation of this so-called coffee."

◆

☞ The Massachusetts Board of Agriculture say that the "cattle disease," or Pleuro-pneumonia has re-appeared in several places in the eastern part of that State, and trace it directly back to the old source. The Legislature has been induced to appoint a new commission on the subject; and the Board of Agriculture, through a committee consisting of Henry H. Peters of Southboro, Phineas Stedman of Chicopee, and Freeman Walker of North Brookfield, have issued a circular, warning farmers to take the necessary precautions against contagion. Where the disease is suspected, the affected cattle should at once be isolated from all others; and care should be exercised by all in purchasing or permitting strange cattle to come in contact with their herds.

Inquiries and Answers.

Culture of Tobacco.—I have taken the liberty of asking you for information in regard to the culture of the tobacco plant. Will you be kind enough to reply through the medium of your paper, stating the time it should be planted—in what kind of ground—how it should be cultivated—when to pluck it—the mode of curing, and in fact all the particulars of the proper way to cultivate the tobacco plant? I have been a subscriber to your paper for some time, and do not remember of seeing anything published in it, in reference to this matter. c. n. l. *Newark, N. J.* [We must refer our correspondent to the Country Gentleman for Sept. 27, 1860, p. 202, where he will find just the information he asks for, illustrated by several engravings. The same article may also be found in The Cultivator for 1860, page 338, the bound vol. of which we can send postpaid for $1.]

Big-Head in Horses—Cellar Above Ground.—1. Is there a cure for what is termed the big-head in horses, and if so, what is the treatment?—2. Can you furnish a plan of a substantial yet economical building above ground, that will completely protect from frost, as I have not a suitable place for a cellar? N. Edgerton. [We are unable to give a remedy for big-head, having never had any experience with it, but we suppose it to be very difficult to treat, if not incurable. A building above ground, to exclude frost, should be something after the plan of an ice house, that is, with double walls filled in with tan, sawdust, or chaff. Common cellars owe much of their security against frost to the heat, which passes from the earth through thin walls and from the bottom. The apartment above ground can only receive the heat of the earth through the bottom, and care should therefore be taken to impose no obstruction to its free passage by any thing like a floor. The top should also be well secured from the entrance of frost above, either by placing a building or room above, to be kept warm by use and fire heat; or by a thick stratum of sawdust.]

Churn and Dairy.—Will you or some of your correspondents give through The Cultivator, a description of the best kind of Crank Churn for making butter from a dairy of cows, say ten or fifteen, and where it may be had? Also a description of a building suitable for setting milk, to make the most and best butter—whether wood or brick is best? A Subscriber. *Oswego, N. Y.* [The common thermometer churn is the best that has been thoroughly tried. It may be had at all the principal agricultural warehouses. Descriptions of dairy rooms, illustrated by figures, may be found on pages 211, and 217, of Rural Affairs, vol. 1.]

Liebig's Letters.—D. R. P. and others wish to know in the next number of The Cultivator, if the Letters on Modern Agriculture by Baron Von Liebig, (advertised in last number,) are in the volume of his Complete Works, published some years ago? [They are not; the "Letters" referred to were written and published in 1859, and are not included in any collection of Liebig's other writings.]

Lime.—I have a few acres of meadow land that never has been plowed, and which has failed to produce any grass of account for two or three years. Would it be advisable to apply lime this spring ere plowing? Please give me your opinion, and oblige J. Pierce Bell. *Sabbath Rest.* [A dressing of fifty bushels of lime per acre, more or less, would probably produce a beneficial result, although it does not always do so. The grass land in question might be made to give good crops again by *top-dresssing well* with manure in autumn and harrowing the surface thoroughly early in spring with a sharp or new toothed harrow, sowing grass seed if it apparently needs it. If plowed up, the lime might be applied before or after plowing, but if before the plowing, it should be done the previous year, so that it may be well dissolved into the soil before inversion. There is no doubt that plowing up, cropping, manuring well, and then re-seeding heavily on a top-dressing of compost or fine manure, would result in very heavy crops of grass.]

Quinces from Cuttings.—Let me know the most successful way of raisng quince trees from cuttings, as I frequently fail in my efforts. r. k. *Nashville, Ill.* [Take off the cuttings in autumn,—good one year shoots, with a little older wood—plant them out either late in autumn or very early next spring—if left till spring, they should be kept over in moist earth. They grow best in a compact, not a gravelly soil. We succeed best from autumn setting, mulching the surface of the earth with two inches of clear horse manure, which not only protects from the cold of winter and the drought of summer, but enriches the soil. Spring planting also needs mulching. In the absence of manure, forest leaves may do. The cuttings should be about 8 or 10 inches long, the upper end cut off, so as not to project more than an inch or two out of the ground, which should be trodden compactly about them, especially below. They may be planted in trenches cut with a spade by a line, and the cuttings be about half an inch apart in the row.]

Cockspur Thorn.—*Crataegus crusgalli.* What kind of soil should seeds be planted on, and how managed to insure their vegetation? Please inform us where the directions for growing Feather Grass—*Stipa pennata*,—can be found? An article on the subject appeared in The Cultivator some time since, but the index gives no clue to its whereabouts. c. *Brookline, Mass.* [The Cockspur thorn will grow in any good soil, suitable for corn or fruit trees. The seed should be taken when nearly fresh, and kept slightly moist in sand or soil till planted. Soaking them a few hours in warm water, and then freezing them, and repeating the process, will insure and hasten growth. Such as do not grow the first year will be likely to grow the second. We do not know of any peculiar management required for the feather grass, nor where the information sought may be found.]

Rhubarb Wine.—Will you please give me, through The Cultivator, a recipe for rhubarb wine, I have heard of it, but never could find a recipe. j. r. [See page 257, Cultivator for August, 1860, and page 221, July, 1861.]

Alsike Clover.—Please state in The Cultivator where I can procure seed of this variety of clover, how much to sow per acre, and what is the price of the seed. Wm. Maud. *Milwaukee Co., Wis.* [Advertisers would do well to furnish such information as the above through the appropriate columns of our paper.]

Tobacco Seed, &c.—*R. C., New Brunswick, N. J.* You can get tobacco seed of J. M. Thorburn & Co., 15 John St., New-York. It should be sown in a seed bed, and transplanted the same as cabbage. The books you inquire for, can probably be procured at Saxton's bookstore, New-York.

Tanning Hides.—In the "Rural Register" for 1862, is given the method of preparing raw hide for farmer's use, which I think is valuable. I have tanned sheep skins in a very similar way, but had never thought of preparing hides for any practical purposes. It is my present purpose to tan my deacon skins this season, and use some of them for moccasins. I would like to black the flesh side, if you or some of your correspondents, can inform me what kind of blacking to use—how. and when, is the best time to apply it? W. S. Lum. *New Britain, Conn.* [Will some of our correspondents please answer.]

English Agriculture.—What is the price of the book containing your travels in England? d. r. p. *Iowa city.* [The editorial letters on English Agriculture published in the Co. Gent., have never appeared in separate form.]

Paradise Apple.—I would ask the question, what is the Paradise stock which is used for grafting? for I confess I am totally ignorant. I have always supposed it to be the wild crab apple. I have asked even those who cultivate fruit trees for sale, but found them equally ignorant about the same. w. g. *North Bay.* [The Paradise used for working the common varieties of the apple upon, to render them dwarfs, is a very small variety, growing only a few feet high, and rendering the trees small that grow upon it. It is propagated by layers or stools, and is imported from Europe by nurserymen who raise dwarf apple trees. The crab is a totally different species.]

Seeding Down.—In seeding down with clover and timothy for one year's hay and two years' pasture, how many pounds of each should be sown on light soil? Timothy takes well on my land, but clover better. A Novice. *Canada West.* [Good farmers vary much in their proportions of clover and timothy; but a peck per acre of equal parts in mixture is common. Where the growth of timothy is the main object, more of this grass is sown, but there should be some clover to keep the soil loose. Where a grain crop for manure is desired (which is not the case with our correspondent) nearly all clover is sown.]

Old Manure.—We have here in the mountainous districts, many manure heaps that have been accumulating for 12 to 15 years; the owners think it more profitable to clear new land than to spread them. Please tell me what is the relative value of such manure compared with fresh barn-yard manure, and if you think it is worth 10 cents per load and the trouble to haul it three miles over a mountain, where the cost of hauling each load at this season would be only 30 cents. M. Mullin. *Leeds, Lower Canada.* [The value of the manure may vary with circumstances, but it is probably quite as valuable as the best manure in a fresher state. Although much of the fertilizing parts may have escaped, or been washed away, the vegetable portions of the heap have absorbed and retained much, and the fine friable condition it is now in renders it more easily broken up and intermixed with the soil, and more perfectly spread for top-dressing. If properly used,—that is, in connection with good farm management, it will be worth much more than its cost.]

Corn Suckers.—Can you give me any information with regard to the propriety and utility of taking the suckers from corn when growing? At what time should it be done, if at all? I have inquired of many farmers, and they are unable to answer me. N. E. J. [The operation is rarely if ever practiced in the northern States, and we have have no distinct experiments bearing on the question. According to the principles of vegetable physiology, it should be done just as the suckers are forming, so as to obviate the check given to the whole plant by the removal of a portion of its foliage. If done at this early period, it would probably increase the growth of the rest of the plant—later, it might prove injurious.]

Corn Suckers.—In the Co. Gent. of March 13th, "N. E. J." inquires as to the expediency of cutting suckers out of corn. The following is my experience in the matter: A few years since I had an acre of corn near my house, of heavy growth; after it was well tasseled out, I commenced cutting out the suckers and fed them to my oxen in the barn. The oxen improved to the detriment of the corn, for the kernel did not fill out on the ear, and the yield I think must have been 12 or 15 bushels less than if the suckers had remained. J. C.

Improving Hill Land.—I have a piece of land on the top of a hill—it is rather stiff clay and wet, (needs underdraining,) and descends slightly towards the north. The hill is so steep that it is difficult to get manure up there; still it needs manuring. Is was sowed with buckwheat last season, and I have been thinking of sowing it with clover this spring and plowing it under next autumn, and sow with rye, and seed with clover and timothy. I fear I can't plow it in the spring, as it will be too wet. Should I harrow it and then sow, or should the sowing be done before, or as soon as the snow disappears, or can you suggest a better way of managing it. H. [As the soil has doubtless settled considerably since the buckwheat was sown, it is not probable the surface will be sufficiently friable to receive and start the seed without some additional preparation. If it should prove dry enough to harrow and form a mellow surface within a week or two, or even three weeks, of the time that the frost disappears from the ground, there will be no difficulty, provided the grass seed is rolled in or covered with a light brush. After that time it would be safest to plow and sow it with a very thin crop of barley, say one-half the usual amount of seed, or less, which we have found quite successful in such cases. We think it may be better not to plow the clover in the first year, as the roots and whole plant will be larger and more useful the second year, and an additional crop of grass may be taken without detriment, either for meadow or pasturage.]

Pond Mud.—Can you tell me whether the mud taken from the bottom of a canal will pay for hauling it on to a farm that the canal runs through, where such mud is loam. P. *Montour Co., Pa.* [If the mud is washed rapidly into the canal, with little chance for animal matter to become mixed with it, it may be of comparatively little value; yet as it is entirely free from stone, it would make a useful and valuable top-dressing for meadows, applied *evenly* an inch thick, more or less. But if the mud is the deposite of years, and the water of the canal contains a good deal of animal matter, the mud is doubtless quite valuable, as its clayey ingredients have absorbed much ammonia from the passing water, and much fertilizing matter has been deposited in sediment. Will our correspondent try the experiment and report results?]

Cultivating and Seeding Peach Orchards.—I have a peach orchard of ten acres, which is very weedy, and when plowed it is left in a miserable condition for gathering the fruit. I wish to sow it with clover. Will it do to sow buckwheat with the clover, to keep the weeds down till the clover gets a start, or will the buckwheat be injurious to the clover? If you or any of your numerous readers have ever tried it, I should like to know the result. C. [Unless the soil is extremely fertile we think the orchard will be so retarded in growth by seeding down that the fruit will be greatly diminished in value. As a general rule, if the annual shoots made are less than two feet long when in grass, the trees are not thrifty enough, and the orchard should be kept cultivated. Our own experience is, trees well cultivated grow three to four feet each year, and give very fine, delicious fruit; if standing in grass, they grow from three to eight inches annually, and yield small and poor fruit. Plowing once early in the season, and then harrowing once a month, will leave a smooth surface before the peaches are ripe. This is the course adopted by the most successful marketers of the peach in the eastern and middle States. If, however, the growth is sufficient when the trees stand in grass, we would recommend the seeding to be done quite early in spring with no other crop, the seed to be rolled or brushed in. The trees will perhaps furnish some shade to the clover; but if not enough, or if the sowing is late, then instead of buckwheat, (which has considerable foliage, and as usually sown affords too dense a shade for clover,) we would sow about half the usual amount of barley with the clover. Possibly a very thin seeding of buckwheat might be useful.]

Preparing Walnut Nuts for Planting.—I have been saving through the winter some very thin shelled walnuts. Will they germinate by my simply planting them as they now are, or must I crack the shells? Any directions as to what would be the most approved method of treating them, will greatly oblige Newton Ransom. *Ulster Co., N. Y.* [We have not had a large experience with raising walnut trees. As a general rule, all hard shelled seeds are difficult of growth if allowed to become very dry. In this case, they must be either cracked, or else repeatedly subjected to the process of scalding and freezing. Very much depends on the manner in which they have been kept. If in moist soil, no injury whatever has been sustained; if in a dry garret, they may be too dry to grow.]

Rio Grande Spring Wheat.—James M. Rockwell wishes to know where he can procure a few bushels of Rio Grande Spring Wheat for seed. Please say to him that he can procure a few bushels or a few hundred, of me, for one dollar per bushel at the barn, or one dollar and ten cents per bushel delivered on board the cars of the Buffalo, N. Y. and Erie R. R., he paying for bags or barrels. D. B. Waite.

Springwater, N. Y.

Java Spring Wheat.—I notice in your last No. an inquiry in regard to Java Wheat. I believe it maintains its superiority as a Spring variety. It was not so good as the year before, being injured by the louse, especially that sowed late, but not more so than late oats, barley, &c. It is the practice here by the most successful wheat growers, to sow it as soon as the ground is in condition, usually in April. The earliest sown is almost always best. As the Java shells very easily, it should be cut before fully ripe. We are not troubled by the midge in this section, and I believe the Java has never been injured by insects till last year. About 1½ bushels are usually sown to the acre. It is also customary to sow wheat on land that has borne corn the year previous, without manure. As to where seed can be obtained, I raise only for my own use, so have none to advertise, but to oblige any one wishing to try it, will obtain and deliver it at R. R. or Express at $1.75 per bushel, and the cost of bags, &c. Many of our farmers sowed winter wheat last autumn, distributed by the Patent Office, but I learn it failed in every instance. I received the Beardless barley from the same source, but do not regard it as a profitable crop to raise. As a general thing it is not liked by our farmers.

Holden, Mass. C. W. GLEASON.

Disease in Fowls.—Will you be kind enough to inform me what remedy there may be for a disease that has broken out in my poultry house. The symptoms are a running of a watery nature from the eyes, accompanied with a redness around the lids, followed in a day or so by blindness, and with death in three or four days. I have lost some valuable fowls from this disease, and am at a loss to know what to do. My poultry house is well lighted and ventilated, and the fowls have access to the open air whenever they wish it. There is an entire absence of sneezing, coughing, &c., as is manifested in the roup, and having given them only ordinary food with a full supply of earthy substances, I cannot account for the disease and would feel obliged if some one would favor me with a remedy if my description has been sufficiently explicit. E. M.

Transferring Bees.—I have a hive that is too large, and I wish to get the bees from out of it into a smaller one; will Mr. Quinby tell me the best time to do this? The hive they are now in has holes in the top, where I put on boxes, and I propose to set the new hive on top—take out the stopper and stop the present *entrance;* then make one on the lower side of new hive, and thus transfer them. Will this plan answer? J. E. *Belmont Co., Ohio.*

GOODRICH'S SEEDLING POTATOES.

I. VARIETIES.—1. GARNET CHILI, red. 2. PINK EYE RUSTY COAT, white. 3. CUZCO, white. These three are all round, and ripen with the season. The first two yield very largely, and possess a higher degree of hardiness and adaptation to all soils and weather, than any other sorts known to me. The Cuzco is a little less hardy, but is the largest yielder within my knowledge. 4. COPPER MINE, slightly copper colored, longish, in hardiness like the Cuzco, and two weeks earlier than the three preceding.

These four sorts have all white flesh, GROW CLOSELY in the hill, do not PUSH OUT of the soil, and are very smooth and beautiful, except that the Cuzco is a little deep eyed. In most localities they have all acquired a good character for table quality. They have been selected in a thirteen years experiment, from more than ten thousand new seedlings. In good soils and seasons, and with fair culture, they will readily yield from 250 to 350 bushels to the acre, while in the hands of many of my correspondents, they have far exceeded those figures.

☞ I have no very early sorts that are well tested, but hope to have such by 1864.

II. AGE AND DIFFUSION.—The Garnet Chili is a seedling of 1853, and has been before the public for six years. It is now more extensively cultivated than any other new variety, and is beginning to be sold under new names. The other three sorts are seedlings originated in 1856, and have been in market but two years. They are all already known in nearly every State north of Virginia and Kentucky, and in Canada.

III. PRICE.—$3 (three dollars) per barrel of 140 lbs., $1.50 per bush., $1 per half bushel, and 50 cents per peck, CASH IN ADVANCE. The larger price is charged for the smaller quantities from the proportionably greater cost of packing and delivery.

IV. TRANSMISSION.—They will be forwarded by railroad, canal or express, as shall be directed. The sorts shall be kept distinct, and the packages carefully directed. The sorts will be described in a printed sale bill, with directions for potato culture, which will be forwarded by mail when the potatoes are sent.

☞ Sums of less than $1 may be sent in 3 cent postage stamps.

☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.

CHAUNCEY E. GOODRICH, Utica, N. Y.

REFERENCES.—From among very numerous persons who have cultivated these and others of my seedlings for the last two years, I select the following:—George Buckland, Toronto, Canada West: Geo. Bachelder, Stanstead, Canada East. H. M. Cram, Vergennes, and Albert Breese, Hubbardston, Vt. Charles H. Gleason, Holden, Wm. Bullard, Dedham, and Wm. F. Bassett, Ashfield, Mass. Horace Humphrey, Winchester Corners, Ct. Jesse Vaughn, Cheektowaga, Samuel J. Wells, Fayetteville, E. W. Howell, North Chili, O. C. Chapin, East Bloomfield, John Bowman, Baldwinsville, and Edward Merritt, Poughkeepsie, N. Y. W. W. Griscom, Woodbury, and Benj. Sheppard, Greenwich, N. J. P. B. Gray, Half Moon, P. Sutton, Pittston, and Aaron Bombaugh, Harrisburgh, Pa. Yardley Taylor, Loudon Co., Va., J. Howard McHenry, Baltimore, Md. J. C. Holmes, Lansing, and S. T. Douglas, Detroit, Mich. S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill. Feb. 13w&m.

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We are now manufacturing a superior **Steel Plow,** intended for general use. Some of the advantages it possesses over the cast iron plow, are lightness of draught, durability, and freedom from clogging or sticking in heavy, clayey sticky or tenacious soils. The parts most exposed to wear are so constructed that they may be readily repaired by any blacksmith.

We would refer to the following persons who have them in use:

John Johnston, Geneva, N. Y.; Wm. Summer, Pomaria, S. C.; R. C. Ellis, Lyons, N. Y.; Col. A. J. Summer, Long Swamp, Florida; A. J. Bowman, Utica, N. Y.; A. Bradley, Mankato, Minnesota; A. L. Fish, Litchfield, N. Y.; Volney Owen, Union, Ill.; John Slighter, French Creek, N. Y.

"Mohawk Valley Clipper," No. 1, full trimmed, all steel,..	$15.00
do. do. with cast point,..................	14.00
"Empire," No. 1, with cast point, full trimmed,.............	15.00
For Three-Horse Plows,......................	$1.50 extra.
For Adjustable Beams, ...	1.00 do.

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STEEL CULTIVATOR TEETH.

These Teeth are intended to supersede the old style of wedge teeth and teeth with cast iron heads. They are not liable to become LOOSE in the frame, like the FORMER, nor to BREAK, like the LATTER. They are as readily attached to the frame as any form of tooth.

SAYRES' PATENT HORSE HOE.

This implement is considered to be superior to any other for cultivating Corn, Cotton, Tobacco, Potatoes, Hops, Broom Corn, Nurseries, and all crops planted in rows or drills.

Steel Shovel Blades and Cultivator Points made, and all kinds of Swaging and Plow work done to order

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March 21—w&mtf.

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FRANKLIN SEWING MACHINE Co. want a number of active Local and Travelling Agents. A liberal salary and expenses paid, or commission allowed. Address, with stamp, HARRIS BROS., Boston, Mass. (CLIP THIS OUT FOR REFERENCE.) March 27—w&m3mos.

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Resolved—That this Board approve of the Manual of Agriculture submitted by its authors, Messrs. Geo. B. Emerson and Charles L. Flint, and recommend its publication by these gentleman, as a work well adapted for use in the schools of Massachusetts.

Price 75 cents. Copies sent by mail on receipt of the price.

Every farmer and every man who cultivates a garden should have this book. For sale by L. TUCKER & SON.
Jan. 2—wtf. Albany, N. Y.

FRUIT TREES AND EVERGREENS.

200,000 Extra 2 year old Apple Stocks, $5 per 1,000—$40 per 10,000. Also Mahaleb, Pear, Paradise and other stocks. Larches, Norway Spruce, Scotch Fir, Austrian Pines, Balsam Firs, Arbor Vitae, Maples, English Oak, Beech, Hornbeam, Birch, Willows, Ash, Mountain Ash, Linden, Laburnum, Horsechestnut, Hawthorns, Elms, Deciduous Cypress, English Alders, and Shrubs of all kinds, in all sizes.

Catalogues are now ready. B. M. WATSON,
Old Colony Nurseries,
Marce 20—w6t. Plymouth, Mass.

COOK'S IMPROVED PORTABLE SUGAR EVAPORATOR.

The subscriber has received from the proprietors the sole agency for the sale of COOK'S IMPROVED PORTABLE EVAPORATOR in the following counties:

Chester, Delaware and Montgomery in Pennsylvania.
Burlington, Camden and Gloucester in New-Jersey.
New Castle and Kent in Delaware.
Cecil, Hartford and Baltimore in Maryland.

And also an agency for the sale of the MOST IMPROVED CANE CRUSHERS for horse or water power. A limited amount of pur CANE SEED on hand for distribution.

For information about the cultivation of the cane and its manufacture, send for circular. MILTON CONARD,
March 20—wtf. West Grove, Chester Co., Pa.

ROOFING SLATE.—

EAGLE SLATE COMPANY,

**Depot Corner of 10th Avenue
and 12th Street, New-York,
ADAM PONTON.**

**Quarries at Hydeville,
Vermont,
A. K. RIDER, Supt.**

This Company invite the attention of the public to their superior and well known GREEN AND PURPLE ROOFING SLATE, which they are prepared to deliver from their Quarries or Depot, in all size suitable for roofing.

The public are cautioned against a spurious and inferior article, which has been represented and used as "EAGLE SLATE."

A SLATE ROOF IS PREFERABLE

to TIN, SHINGLES or IRON. If well put on it lasts a lifetime without needing repairs. It is as cheap as tin or shingles. It needs no paint. Rain water from a slate roof is pure, it has no taint of decayed wood or paint. Slate roofs are fire proof; Insurance companies favor them. Steam will not affect them.

Experienced slaters, if required, will be sent to any part of the country upon application at the New-York Depot.

Orders addressed as above, or to G. FURMAN, 26 Courtlandt-St., New-York, will receive prompt attention. March 13—w12t.

DOWNING'S FRUIT AND FRUIT TREES

Just Published and for Sale at this Office—sent by mail, post paid, at $1.75.

[From the Maine Farmer.]

Coe's Superphosphate of Lime.

The testimony in favor of the use of Coe's Superphosphate of Lime, is from the most reliable sources, and of so conclusive a character that there should be no hesitation on the part of farmers and others to apply it in the culture of every description of farm crops. Levi Bartlett, one of the most intelligent and successful agriculturists in the country, writes as follows:

WARNER, N. H., Dec. 23, 1861.

MESSRS. COE & CO.:—Your favor of the 14th inst. was duly received. In reply to your inquiries about the use and results of your Superphosphate of Lime in this vicinity the past season, I am happy to say its application gave very general satisfaction—so much so that the testimony is strongly in favor of its use, and many that used it the past season will purchase more largely the next spring.

The Superphosphate was mostly used for the corn crop; some of the farmers estimating the increase of the crop at least twenty-five per cent.

I procured a bag of your brand at Manchester last spring, as also a bag of Peruvian Guano. I experimented with the two manures, in equal quantities, on different soils and crops—such as corn, potatoes, beans and turnips. In every instance the Superphosphate exhibited the most marked effects.

There has been but little Superphosphate used in this vicinity till last spring, and that mostly on the corn crop. I have no doubt further experiments would have shown it equally valuable on most of our farm crops—and much more so on the turnip tribe of plants. I used it freely in growing the sweet German turnip, the bulbs averaging twice the size of any grown in previous years, on similar land and culture, except the Superphosphate. You are aware of the importance attached to Superphosphate in Great Britain, in the growth of turnips and other root crops. The nutrition of plants is the same the world over. The same manures found useful on the long cultivated soil of Old England, will be found equally useful on the long cultivated soil of New England. Among the artificially prepared manures in England, Superphosphate has a well deserved and high standing.

To give some idea of the expenditure of British farmers for bone-dust and Superphosphate of Lime, I give the following figures, recently employed by Prof. Anderson of Glasgow, in a paper on "Analysis and Valuation of Manures;"

Annual amount of bone dust, 40,000 tons, at £6,	£240,000
Annual amount of Superphosphate made from bone and bone ashes	770,000
Annual amount of Superphosphates from Coprolites,	360,000
	£1,370,000

Or, in dollars, six million, eight hundred and fifty thousand, annually expended for bone and Superphosphate for manuring their "rented acres." English, Irish and Scotch farmers find it for their interests to purchase largely of commercial manures in addition to all that can be made upon their farms, which is generally managed with the most scrupulous care and economy. It will be well for New-England farmers to carefully test the experiment of using Superphosphate.

March 20—w&m1t. (Signed) LEVI BARTLETT.

GARNET CHILI AND OTHER NEW SEEDLING POTATOES.

Five Hundred bushels, for sale by the subscriber. Price of Garnets $1 per bushel, or $2.50 per barrel. Circulars free.

March 20—weow3tm1t. C. W. GLEASON, Holden, Mass.

LARGE VINES OF THE CONCORD, CREVELING, DELAWARE, DIANA, HARTFORD PROLIFIC and REBECCA,

for immediate bearing. Prices reasonable. Catalogues sent to applicants enclosing stamp. HEFFRON & BEST,

Feb. 6—wtfm3t. Utica, N. Y.

A NEW GOOSEBERRY AND NEW RASPBERRY

from the great West. The Gooseberry is large, smooth, prolific, of fine flavor, and free from Mildew. The Raspberry is a black cap, even larger and finer than Doolittle's Improved. Circulars sent on application. HEFFRON & BEST, Utica, N. Y.

Feb, 6—wtfm3t.

OSIER WILLOW—Salix Purpurea.—

Cuttings and Plants at low prices. HEFFRON & BEST,

Feb. 6—wtfm3t. Utica, N. Y.

NORTH RIVER AGRICULTURAL IMPLEMENT AND SEED WAREHOUSE.

This is the largest depot in the country for the sale of

No. 1 Peruvian Guano, Superphosphate of Lime, Bone, Plaster, Poudrette, &c.

GRIFFING BROTHER & CO.,

Feb. 27—w8tm2t. 60 Courtlandt-St., New-York.

100,000 BARRELS OF THE

LODI MANUFACTURING CO.'S POUDRETTE

FOR SALE BY

JAMES T. FOSTER,

No. 66 Cortlandt-St., New-York.

THE large facilities which they enjoy by exclusive contract for all the night soil of the city of New-York, and the large capital invested in their extensive works, enable them to manufacture an article which is superior to any other fertilizer in market, taking COST and YIELD into consideration. It will be sold at the usual price of $1.50 per barrel for seven barrels or over, delivered free in New-York city.

Please take notice that the office and sale of this Company's Poudrette is changed from Messrs. Griffing, Brother & Co., No. 60 Cortlandt-Street, to No. 66 CORTLANDT-STREET.

Other brands of what purports to be Poudrette are in market, put up in barrels to resemble this. Beware of frauds—buy that only which has the brand of the Lodi Manufacturing Co. Any other article is comparatively worthless.

We call attention to the following experiences of practical farmers in different sections of the country:

NORTH PEMBROKE, MASS., Oct. 7, 1861.

James R. Dey, Esq., President of the Lodi Manufacturing Co.:

Dear Sir—The early autumnal frosts for several years past have seriously injured our corn crops, and rendered it necessary for farmers in this section to seek some fertilizer to give their crops an early start, in order to bring them to maturity in season to avoid that calamity. Having experimented with Guano, Superphosphate of Lime, etc., etc., with indifferent success, in the spring of 1860 I purchased four barrels of the Lodi Manufacturing Co.'s Poudrette, which I applied principally to my corn crop, with the most satisfactory results. This was the first Poudrette ever introduced into this vicinity. Last spring I procured from your branch office in Boston about 30 barrels, the most of which I sold to my neighbors, who had witnessed the effect of my last year's trial, which, so far as heard from, has given universal satisfaction. To further test the efficacy of your Poudrette, this season I plowed about two acres of light sandy soil, which had laid in grass about six years (the last crop of grass being very light.) This I planted with corn and potatoes, applying about four and a half barrels of Poudrette, with no other manure, except a handful of ashes to each hill at the first hoeing, and from present appearances we shall have a better crop than on a field of like soil where we applied twenty-five loads of manure to the acre. Its effects on garden vegetables are equally apparent. I am, very respectfully, yours,

HORACE COLLAMORE.

MERRILL, ME., Oct. 11, 1861.

Lodi Manufacturing Co.:

Sirs—I bought of your agents, Cross & Newell, two barrels of your Poudrette, and in using the first I got sick of it, and sold the other barrel. But the one that I used I tried the principal part on potatoes. I used about half a pint to the hill, and the yield was equal to those planted on manure at the rate of twenty loads to the acre. My neighbor who bought the other barrel says if he had bought five barrels more he would have saved the price of twenty barrels. Yours, &c.,

V. B. PAUL.

WALDO, ME., Oct. 12, 1861.

To to the Lodi Manufacturing Co.:

Gentlemen—Last spring I bought from Cross & Newell one barrel of your Poudrette, as an experiment, with but very little faith in its utility. I put it on 6 rows of corn in different parts of the field, after manuring with barn-yard manure in the usual way—at the second time hoeing, where I put the Poudrette the corn was twice as large as the rest of the field, and this now is one-third heavier, and has ripened about eight days earlier. I think it the very thing we want for raising corn in this country, and shall use it more extensively another year

Yours, &c., WELLINGTON SHOREY,

SMYRNA, DEL., Oct. 1, 1861.

Gentlemen--I had heard of the Poudrette manufactured by the Lodi Manufacturing Co., and thought I would try a small quantity on a lot of land intended for corn, and as I could not get it nearer than Philadelphia, I went and bought of the agent twenty barrels, and applied two barrels to the acre, dropping the corn and a handful of Poudrette in each hill. I left out a part of two rows and put no Poudrette, to ascertain if there was any value in it, and noticed those two rows during the season; and where the Poudrette was used the corn was decidedly the best, and I have no hesitation in saying it is a good manure for corn. I am certain I made from one-third to one-half more by using it. Yours, respectfully,

JOHN G. BLACK.

CHESTER, PA., Sept. 14. 1861.

To the Lodi Manufacturing Co.:

Gentlemen—I purchased this season of Messrs. Baker & Co., eleven barrels of Poudrette, and one bag of Phuine, which I put on my corn. I marked the place where I put the Phuine, which, when started, seemed ahead, but now the corn where the Poudrette was on is much the best. Last year I used Allen & Needle's New Fertilizer, which did no good at all, as the corn done better without the manure. I think the Poudrette made by your Company the cheapest manure in use.

Yours, &c., A. R. PERKINS.

The Company's pamphlet, containing directions for its use, with other valuable information and the experience of over one hundred farmers, will be sent free to any one applying for the same. Address

"JAMES T. FOSTER,"
Care of Lodi Manufacturing Co.,

Jan. 2—w13tm3t. 66 Cortlandt-St., New-York.

Agricultural Books for Sale at this Office.

SHORT-HORNS AND ALDERNEYS FOR SALE.

The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,
Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

SHORT-HORN BULLS FOR SALE.—

I offer for sale, or will exchange for SOUTH-DOWN SHEEP, the bulls Jack Rover and Wide Awake. For pedigrees see 5th vol. A. H. Book. MILNER CASE, Avon, Hartford Co., Conn.
March 13—w3tm1t.

BERKSHIRE SWINE AND YOUNG SHORT-HORN BULLS FOR SALE.

Berkshire Sows to produce litters in April and May next varying in price from $20, $15 and $10 each, and Boars old enough for propagation, at the same prices. Boxed and delivered on rail car or ship board. L. G. MORRIS.
Jan. 23—w&mtf. Scarsdale P. O., Westchester Co., N. Y.

IMPORTANT TO CHEESE MAKERS.

THE ONEIDA CHEESE VAT,

Ralph's Patent, is superior in practical utility, material and workmanship to any in use. Though but recently patented and introduced to the public, the demand for them is unprecedented. Circulars containing a general description, sizes and prices, sent by mail on application to WILLIAM RALPH, Holland Patent, N. Y., of whom State, County and Town rights for this valuable improvement may be obtained on reasonable terms. Jan. 16—w&mtf.

JOSEPH BRECK & SON, SEEDSMEN & FLORISTS, 51 & 52 North Market-St., Boston,

Offer for sale the choicest collection of VEGETABLE SEEDS to be found in this country, including every new and rare variety, of their own raising or importation, and are warranted reliable in every respect.

By remitting $1, $2, $3, $5 or $10 we will send, free of charge, liberal assortments put up for family use as may be wanted.

Our collection of FLOWER SEEDS, embracing everything new from London, Hamburgh and Paris, are from the best Florists of Europe, and have always proved to be good and true. Such as are raised best in this country are grown by our senior partner, JOSEPH BRECK, Esq., President of the Massachusetts Horticultural Society, whose well known love of flowers will not allow any that are not really fine to grow in his garden, or the seeds from indifferent ones to be sold.

By remitting $1, $2, $3, $5 or $10 the finest selections will be made by himself, and forwarded. Catalogues gratis. Feb. 20—w6tm2t.

TRUE DELAWARE GRAPEVINES, FROM THE ORIGINAL VINES,

One year old, 50 cents to $1; 2 years old, and strong layers with fruit wood, $1.50 to $2. Less by the dozen or hundred.

Also Cuyahogas at $1 to $1.50; Allen's and Roger's new Hybrids, Crevelings, Dianas, Concords, Hartford Prolific, Rebeccas, and

Many other Valuable Kinds, New and Old,

at as low prices as they can be had from any reliable source.

Descriptive price lists sent to all applicants.

Feb. 13—w9tm2t. GEORGE W. CAMPBELL, Delaware, Ohio.

AGRICULTURAL AND HORTICULTURAL

Books for sale at this office.

CHOICE AND RELIABLE SEEDS

BY MAIL, POSTPAID, TO ALL PARTS OF THE UNION.

◆ ◆ ◆

B. K. BLISS, Seedsman & Florist, Springfield Mass.,

WHOLESALE AND RETAIL DEALER IN

GARDEN, AGRICULTURAL & FLOWER SEEDS.

Would invite the attention of Amateurs, Florists, Gardeners, and all interested in Agricultural pursuits, to the NINTH EDITION of his DESCRIPTIVE SEED CATALOGUE for 1861-62, containing accurate descriptions of 1,350 VARIETIES OF FLOWER SEEDS, and upwards of 350 varieties of VEGETABLE AND AGRICULTURAL SEEDS with special directions for the culture of each variety, so simplified as to be clearly understood by the most inexperienced person. It will be mailed to all applicants upon receipt of a three cent stamp.

A Supplement to the above, containing a list of all of the novelties introduced by European Florists, the past year, with many other valuable additions, will be published early in March, and mailed to all who have received a copy of the Catalogue.

Particular attention is invited to his choice collection of

French and German Asters, Carnation and Picotee Pinks, Calceolarias, Cinerarias, German Stocks, Coxcombs, Double Hollyhocks, Camellia-Flowered Balsams, Gloxinia, Mimulus, Verbenas, Pelargonium, English Pansies, Chinese Primrose, Sweet Williams, &c.

received direct from the parties who grow these plants for the English and Continental Exhibitions, by which we are enabled to insure to purchasers Pure and Genuine Seeds of the best sorts in cultivation, raised from prize flowers only.

Flower Seeds by Mail.

The following collections, embracing many of the most desirable varieties, (including several novelties,) have been sent out from his establishment for the past eight years, and are now favorably known in every section of the country, will be sent by mail, postpaid, to any address in the Union, on receipt of the price affixed.

No. 1 contains twenty choice varieties of Annuals	$1.00
No. 2 contains twenty choice varieties of Biennials and Perennials	1.00
No. 3 contains ten extra fine varieties of Annuals and Perennials, embracing many of the new and choicest in cultivation	1.00
No. 4 contains five very choice varieties, selected from PRIZE FLOWERS of English Pansies, German Carnation and Picotee Pinks, Verbenas, Truffaut's French Asters, Double Hollyhocks	1.00

Any one remitting $3 will receive the four assortments, postage free.

The following additional assortments will also be sent at the prices annexed, free of postage.

No. 5 contains fifteen very select varieties of Greenhouse Seeds,	$3.00
No. 6 contains one hundred varieties of Annuals, Biennials, and Perennials, including many new and choice varieties.	5.00
No. 7 contains fifty varieties of Annuals, Biennials, and Perennials,	2.50
No. 8 contains twenty varieties of hardy Annuals, Biennials, and Perennials, for sowing in the autumn,	1.00

The seeds contained in the above assortments are of our own selection. Purchasers who prefer to make their selection from the Catalogue, will be entitled to a discount proportionate to the quantity ordered, as follows:

Purchasers remitting $1.00 may select seeds at Catalogue prices amounting to $1.10

do.	do.	2.00	do.	do.	do.	2.25
do.	do.	3.00	do.	do.	do.	3.50
do.	do.	4.00	do.	do.	do.	4.75
do.	do.	5.00	do.	do.	do.	6.00
do.	do.	10.00	do.	do.	do.	12.50
do.	do.	20.00	dc.	do.	do.	26.00
do.	do.	30.00	do.	do.	do.	40.00

Prices to dealers whose orders exceed the above amounts, will be given upon application.

Collections of Vegetable Seeds by Mail.

No. 4 contains forty-five varieties, his selection,			$2.00
No. 5 contains twenty	do.	do.	1.00

The above collections contain only the most desirable varieties. They are put up in packets containing ¼ to ½ ounce each, affording an ample supply for a small family for a season. Those who wish to obtain larger quantities are referred to the following collections, which, on account of their bulk, can only be sent by express:

No. 1.—COMPLETE COLLECTION, sufficient for a large garden for one year's supply, comprising twelve quarts of Peas of the very best sorts for succession, six varieties each of Beans, Cabbage, Turnips, Corn; four varieties each of Lettuce, Onions, Radish, Muskmelons, Watermelons, Cucumbers; three varieties each of Tomatoes, Cauliflowers, Celery, Broccoli, with a full supply of Spinach, Beet, Carrots, Cress, Parsley, Parsnip, Salsify, Egg Plant, Pepper, Endive, Sweet and Pot Herbs, and many other sorts of culinary and vegetable seeds in liberal quantities,	$10.00
No. 2.—COMPLETE COLLECTION for a moderate sized garden, containing six quarts of Peas, and most of the other varieties in proportion,	5.00
No. 3.—COMPLETE COLLECTION for small garden,	3.00

A list of the contents of each collection will be found in the Catalogue.

Those who prefer to purchase BY THE OUNCE will be supplied by mail at Catalogue Prices, WITHOUT additional charge for postage.

☞ All orders must be accompanied with the cash. ☜

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MILCH COWS AND DAIRY FARMING; Comprising the Breeds, Breeding, and Management in Health and Disease, of Dairy and other Stock; the selection of Milch Cows, with a full explanation of Guenon's Method, the Culture of Forage Plants, and the production of Milk, Butter and Cheese; embodying the most recent improvements, and adapted to Farming in the United States and British Provinces. With a Treatise upon the Dairy Husbandry of Holland; to which is added Horsfall's System of Dairy Management. By CHARLES L. FLINT, Secretary of the Massachusetts Board of Agriculture; Author of "A Treatise on Grasses and Forage Plants," &c. Liberally Illustrated.

The above valuable work—the best, we have no hesitation in saying yet issued upon the subject—is for sale at the office of this paper.

Albany, Jan. 1—w&mtf. L. TUCKER & SON.

THE HORSE AND HIS DISEASES.

Embracing his history and varieties, breeding and management, and vices; with the diseases to which he is subject, and the remedies best adapted to their cure. By Robert Jennings, V. S. To which are added Rarey's method of taming horses, and the law of warranty as applicable to the purchase and sale of the animal. Illustrated by nearly 100 engravings. Price $1.25 by mail, postpaid. For sale by

LUTHER TUCKER & SON, Co. Gent. Office, Albany, N. Y,

1,500,000 CRANBERRY PLANTS! Of the celebrated CAPE COD, BELL or UPLAND, and CHERRY or MARSH varieties, from CULTIVATED grounds, for sale at low prices.

A general assortment of FRUIT and ORNAMENTAL TREES, SHRUBS, PLANTS, &c., &c., on favorable terms.

Please send stamp for Catalogue.

The Cranberry Culturist, a practical treatise on the culture of the cranberry, both marsh and upland, sent prepaid to all applicants on receipt of 12 cents in stamps.

WILLIAM H. STARR,
East New London Nurseries,
New London, Conn.

March 26—w3tm1t.

CONCORD GRAPES, &c.—Strong roots, two years old, one year transplanted—bearing size at $30 per 100. One year old, well rooted layers from the open ground $12 per 100—all cut back.

CATAWBA AND ISABELLA, $5 to $10 per 100, together with most of the popular leading varieties in limited quantities, at low rates.

NEW ROCHELLE BLACKBERRIES—Belle de Fontenay, Brinckle's Orange, Fastolf, and other RASPBERRIES—La Versaillaise and Cherry CURRANTS.

EVERGREENS—Hardy foreign and native varieties, a large stock and fine specimens.

STOCKS—Angers Quince, Doucin and Paradise Apple; imported Pear Stocks: Manetti Rose, &c.

DAHLIAS—New Hybrid Gladiolus, and other BULBS.

VERBENAS and other BEDDING PLANTS.

Fifty pounds HUBBARD SQUASH SEED, 12 cents per ounce, free by mail. WILLIAM ADAIR, Detroit, Mich.

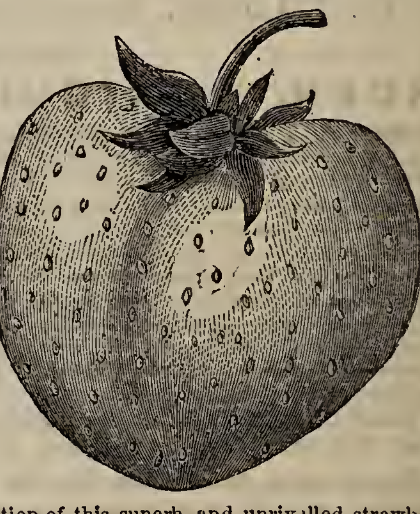
March 27—w4tm1t.

BEES—The subscriber will sell a large nunber of ITALIAN BEES the queens, or full colonies—Two hundred stocks of common bees—Glass honey boxes—Books on Bee Culture, &c. Circular with prices sent on application. Address

M. QUINBY,
St. Johnsville, Montgomery Co., N. Y.

Feb. 20—w3tm2t.

TRIOMPHE DE GAND STRAWBERRY.



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March 27—w&m1t.

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THE CULTIVATOR.

Third] TO IMPROVE THE SOIL AND THE MIND. [Series.

Vol. X. ALBANY, N. Y., MAY, 1862. No. 5.

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J. J. THOMAS, ASSOCIATE EDITOR, Union Springs, N. Y.

TERMS—Fifty Cents A Year.—Ten copies of the Cultivator and Ten of the Annual Register of Rural Affairs, with one of each free to the Agent, Five Dollars.

THE CULTIVATOR has been published twenty-eight years. A New Series was commenced in 1853, and the nine volumes for 1853, 4, 5, 6, 7, 8, 9, 60 and 61 can be furnished, bound and post paid, at $1.00 each.

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The Cultivator & Country Gentleman.

[For the Country Gentleman and Cultivator.]

CORN AFTER BUCKWHEAT.

Exhaustive Power of Different Crops.

Messrs. Editors—Experience is quite at swords points with itself as to the exhausting effects of buckwheat. Count Gasparin, a man as skilled in agriculture as he is able in writing about it, says:

> "Buckwheat, when cultivated in countries adapted to its growth, has valuable properties. It is not an exacting crop, and accommodates itself to the poorest soils, proportioning, however, its yield to their lack of fertility. In northern countries (of Europe) it usefully fills the interval between the the gathering of early harvests, especially those of barley, and the preparation for the crops of the succeeding year. It is the first crop which is put upon new plowed land. It gives the soil time to settle; it profits from the manure which is laid on for a succeeding wheat crop, and which ripens and becomes suitable for the nourishment of wheat. Its abundant foliage adapts buckwheat to smother weeds, and at the same time to collect abundantly the fertilizing matters of the atmosphere. It has also been remarked that this plant exhausts the soil but little."*

In all the agricultural books we find substantially the same statements. Among farmers generally buckwheat has the repute of not exhausting the soil. What does it mean then that Messrs. Holden and Colburn find that buckwheat is "a bad crop for the soil." Is there anything peculiar in the soils of North Clarendon and Springfield, in the State of Vermont? Has the plant suddenly changed its habits and requirements—sported, as the florists say, into a new variety? Or are the old authorities wrong after all? Perhaps because Gasparin, Burger, Thaer and Arthur Young were book farmers, albeit honest, practical men in the start, nature and buckwheat have conspired to put them to shame, and turn their counsels into confusion! Perhaps chemistry can help us, and yet A. W. W. of Downingtown, Pa., the bold man who has dared to write the "last word" save perhaps this, after frankly declaring that, "chemically speaking" he knows "nothing about it," quizzically inquires, in unmitigated italics, *who does?*

All I know about the chemistry of this crop is that in 100 pounds of the grain of buckwheat there are, in round numbers, and for practical purposes, just about the same quantities of carbon, oxygen, hydrogen, nitrogen, phosphorus, sulphur, potash, &c., &c., throughout the list, as exist in 100 pounds of husked rye, wheat, barley, oats or maize. This assertion is on the evidence of the latest authorities I can find.† As to the straw of buckwheat, I have access to but one analysis, according to which it is destitute of the silica which forms 50 to 70 per cent. of the ash of the straw of the proper grains, and contains twice as much alkalies, (40 per cent.,) twice as much lime, (16 per cent.,) and twice as much phosphoric acid (10 per cent.) In the absence, however, of any data as to the percentage of mineral matters in the straw, and the proportion of straw to grain, it is not possible to exhibit much "science" in discussing the chemistry of the subject. Suffice it for present purposes to say that in our opinion, common sense, taking into account the facts of experience and science together, and winnowing them well in the fan of her incredulous criticism, (whereby be it known to the rapid chemists and slow "practical men," that a vast cloud of chaff and Egyptian darkness, mislabelled "truth" and "fact," go off to the frightened leeward,) may find the real gist of the matter, and render buckwheat as satisfactory a subject for contemplation as flap-jacks are for gustation.

The questions before us are: Does buckwheat exhaust the soil, and if so, how much? In other words, is it a bad crop for the soil? If so, when and to what degree?

The first question I shall answer by asking another. Does it exhaust a man to do a day's work? Obviously the result of a day's work upon a man is not what the mathematicians call a "constant quantity." It depends upon at least two circumstances, either of which may vary to an indefinite extent. To proceed systematically with the argument, it depends, 1st. Upon the nature of the man. A strong man is less likely to suffer exhaustion than a weak man, a well man than a sick man, a skilled man than a raw hand. My big, raw-boned neighbor, Hercules Stark, has done day's works all his life, and never was exhausted; but that delicate young aristocrat from the city, Nehemiah Poughney Doolittle, is out of breath, and has a pain in his liver with spreading one swath of timothy—2d. It depends upon the character of the day's work. Other things being equal, a long day's work exhausts more than a short one, a hard one more than an easy one, a hot one more than a cool one, one that has been paid for more than one that will be paid for, and one of the head more than one of the hands.

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*Cours d'Agriculture, vol. 3, p. 720.

† Die Getreidearten und das Brod. Von Bibra, 1860.

Verily circumstances alter cases. If we ask a company of jolly mowers working in the hay field of a good natured farmer who pays promptly, commends heartily, feeds well, and inquires of the men kindly after their wives and little ones, we shall hear their unanimous verdict, that a day's work doesn't exhaust them; only keeps them in appetite and good health, and makes them sleep well. But stand at the door of a Manchester cotton mill when the operators are turned out at night, and you may read in the faces of the pale, sallow, hollow-eyed column that files past, that a day's work exhausts both the vigor of the body and the spring of the heart.

So with the buckwheat question, we may expect to have it answered both *yes* and *no*.

When on a soil of medium or inferior strength, which gives a fair return with good manurings and judicious rotations, we sow buckwheat under such circumstances as to secure a *heavy crop*, the soil is certainly exhausted, considered with reference to another heavy grain crop. Thus Mr. Holden turned under grass, applied a fair coat of manure, and had a crop which ought to have been pretty heavy. How heavy he does not say, but he does not complain of it being small. After buckwheat had thus consumed the sod manure, corn was planted and failed to make ears. Why? Obviously because it had nothing to make them of! Close by, however, in the same field where buckwheat had not grown, corn did well. Why? Because it was planted on an inverted sod, *as the buckwheat was the year before.* To make the trial satisfactory by putting the corn and buckwheat into the same conditions, Mr. Holden ought to plant corn this year where he had it last. Very likely it wouldn't make ears. Mr. Colburn turned in a light crop of grass in June, sowed to buckwheat, and had *a heavy crop.* Next year he manured the same field well, and planted to corn; it came on slowly, and yielded a fair growth of fodder, with an undue proportion of soft corn. Liking a crop of *forty bushels* of buckwheat, he repeated the process a year or two after, and with the same results. Mr. C. says: "I then made up my mind that buckwheat is not only an exhausting crop, but that it leaves the soil unfit for a good crop after it, until it can recover from the effects of the buckwheat."

Now it would almost appear that Mr. C. has allowed his feelings to warp his judgment. If, as is stated in a slip I cut from an agricultural paper—(an extra copy, I don't generally cut agricultural papers)—a bushel of buckwheat weighs 52 pounds, then 40 bushels of buckwheat is a yield corresponding to 34 bushels of wheat. Would Mr. C. think of getting good corn on a field the next season after harvesting from it 34 bushels of wheat? And if he should try it and get only "a fair growth of fodder, with an undue proportion of soft corn," would he venture to say that "*wheat* is a bad crop for the soil?"

A. W. W. understands this matter. He remarks in general terms "that a grain crop taken from the soil is more exhausting than a grass crop, which practically accounts for the difference in crops after buckwheat and grass." "I have, however, succeeded in raising good crops of corn after buckwheat by a *little extra manuring*," he continues.

The fact is, it is not the name of the crop which exhausts, but the number of pounds that we take off from an acre. Buckwheat is mentioned in agricultural books as giving a very variable crop. Gasparin quotes from Burger a table of the yield of buckwheat cultivated for 16 years in the same locality, (Carinthia, in Austria,) and uniformly sown upon the stubble of winter rye. The yield ranges from the extremes of 2 to 32 bushels, the average being 13 bushels. In Flanders the maximum yield is 56 bushels, the average 17 bushels.

The average crop is not exhausting to average soils, the best crop is not exhausting to the best soils, and the poorest crop is not exhausting to the poorest soils.

Buckwheat is peculiar for its faculty of getting on to some extent in the most barren soils. It won't be killed by any ordinary untoward circumstances. This tenacity of life is precisely what adapts it for culture on light lands. But where well fed, and when the weather, to which it is quite sensitive, is favorable, it is capable now and then of rivalling wheat in the amount of nutritious produce it can furnish, and when it does give a large crop its roots must take hold of the soil, and leave it in a state of temporary exhaustion, from which rest or manure alone can enable it to recover.

The reputation of buckwheat as a crop that is not exacting or exhausting, rests then upon the general fact that it is cultivated under circumstances of soil, manuring and rotation, in which its yield is moderate and its drain upon the soil moderate. Exceptional cases do not invalidate the general truth.

It must be confessed, however, that the agricultural use of the word exhaustion, is for the most part an erroneous one. To exhaust a soil absolutely, is a practical impossibility, no matter what kind, succession or number of crops we put upon it. Of relative exhaustion we may have quite any number of varieties or degrees. But in ordinary agricultural language it is customary only to speak of exhaustion without any qualification, and more often than otherwise no facts are given which enable one to judge of its amount. Owing to this looseness of language, which is due to an indefinite and inexplicit way of thinking upon the subject, we find in the agricultural papers, on the authority of somebody or other, that every crop, and worse still, every manure almost, except stable dung, is exhausting. A. says wheat is exhausting; B. declares maize is exhausting; C. knows rye is exhausting; D. tells us to try tobacco if we would like to see an exhausting crop, and finally "buckwheat is bad for the soil." Guano, bones, superphosphate, &c., &c., are also exhausting. It is all true. On the other hand, all these crops and manures are so far from being exhausting that they are beneficial, so say X., Y. and Z., and they are good authority.

Circumstances alter cases, and our moral is: Consider the circumstances, for in them you will find the reason of the case. Day is a fact, and night is a fact. Opposites may be true. Let us be cautious then about laying down general rules or deducing universal laws from the experience of a ten acre lot. SARRASIN.

BAD ADVICE ABOUT SEEDING.

A correspondent of the *N. E. Farmer* says that a farmer of Canterbury, N. H., told him some facts which had led him to think that he had been seeding his land too much, especially, as it was very strong. In laying down nine acres to grass in the spring, he sowed oats, at the rate of a half bushel to the acre. The result was five hundred bushels of oats from the nine acres. Also his wheat, when sown thin, filled better, and yielded more.

MESSRS. EDITORS—So far from subscribing to the foregoing which appeared in your paper of 27th of February, I have been for some years increasing the quantity of seed oats, and now never sow less than three bushels and generally four. If the land is very rich, moist and abounding in vegetable mould, I sow still more.

Formerly when I sowed two bushels to the acre I was glad to obtain a yield of 30 or 40 bushels, and frequently got less—the straw full of weeds and badly lodged. Now I get without difficulty from 50 to 70 bushels; am never troubled with weeds and seldom have it lodge.

This sowing of half a bushel of seed to the acre may do down in "Canterbury," but no where this side of there I fancy.

Fearing that silence might be construed into an approval by the whole agricultural world of what I consider so great and dangerous a *heresy*, I wish to place upon record my protest.

In England, I believe the usual quantity sown is from four to six bushels—but in this country from three to four is probably sufficient. My observation and experience teach me that the quantity of grain and grass seed sown is generally too little—seldom too much.

Elm Park, near Fort Wayne, Ind. I. D. G. NELSON.

[For the Country Gentleman and Cultivator.]

THE BAROMETER.

Messrs. Editors—I noticed an inquiry in The Cultivator, about Barometers. In answer would say—I am a plain common farmer—have taken The Cultivator for years, and keep a barometer, (Timby's, manufactured by J. Merrick & Co., Worcester, Mass.,) and I find said instrument very useful even for *common farming purposes*. It is a plain simple machine with the column of mercury in sight, with slide index attached, and cost $7. I should be very loth to part with the barometer at any price, and go back to the old method of *signs* and *guessing* about the weather, when I can tell by simply looking at the *machine;* yet it requires careful observation and study; and, Mr. Editor, you would do your subscribers a favor I think, by giving them some plain rules for studying the barometer. A Subscriber. *Cornwall, Vt.*

We will give two rules, which we think will comprise all that is essential, although some would sub-divide them, and add many more, all depending on these.

1. A rise of the column indicates fair weather; sinking, rain in summer, sometimes wind; and wind in winter, sometimes rain. The actual height of the column has less to do with it, than the fact whether it is going up or going down.

2. Set the index in the morning, at noon, and in the evening, and observe the column in connection with the accompanying or coming weather. Constant observation in this way for a few months will give a better knowledge of the instrument than any written instructions, as there is a considerable variation in the indications in different localities.

[For the Country Gentleman and Cultivator.]

SHANGHAI SHEEP.

These sheep are, I fancy, but little known to the great mass of sheep raisers in this country, and I think it well to call their attention to them, especially those who supply our markets with mutton. They are gentle, never jump fences, and I should judge from the little experience I have had in such matters, are easy keepers—their principal recommendation is their rapid increase, and the superior quality of their flesh. In China the mutton is considered by foreign residents, English and American, as of the very highest order, and I have heard Englishmen admit that it was quite equal to any raised in Great Britain. In this country I have had but one opportunity of eating it, and found it far superior to the ordinary mutton sold by our butchers. Now for my experience as to their fecundity.

On the 12th of March, 1860, I got from a ship from Shanghai one ewe and three lambs, about six weeks old, which had been born on the passage. The lambs were the offspring of this one ewe—two were males. From this one ewe and her progeny I have raised 18, of which nine were males and nine females. The ewes have almost always twins, often three, and sometimes four. I have now three lambs born on the 16th of Feb., which are as large and hearty as any I have raised, and the dam seems to have no difficulty in supplying her large family with milk, although she (as is true of all of them) has but two teats. I have at present 10 ewes, 1 ewe lamb, 3 buck lambs, 5 wethers and 1 ram,—20 in all, having only disposed of two rams at different times in exchange for pure blooded rams, in order to avoid in-and-in breeding.

The Shanghai sheep has no horns; some have long flap ears, and some short and pointed ears—high noses.

The wool is very poor, being very hairy; still I have been told by manufacturers that it could be used in common carpets. Perhaps if this breed was crossed with the Merino or South-Down, a desirable fleece might be the result. I wish some competent sheep farmer would take the trouble to try such an experiment. As I have but a few acres, and no sheep or wool knowledge, my experiments would be of little value.

I merely add that my small flock is not for sale.

Morristown, N. J. O.

[For the Country Gentleman and Cultivator.]

Fecundity and Hardiness of South-Down Sheep.

Messrs. Editors—It is my aim to keep entirely clear of any controversy on sheep matters, as it would be about impossible for me to write my own opinion and experience of South-Down sheep without appearing in an unfavorable position as a South-Down breeder; and I might be judged of what I despise in others, viz., having an axe to grind. You will allow me simply to remark that I breed sheep for the love of it. But as you request me to respond to Mr. Nelson's remarks, I have decided to write a few short articles, somewhat at random, on sheep management.

Having owned sheep for twenty-eight years, it might be expected I should know how to manage them, but I claim no such knowledge, and if persons on inspection find my sheep, as regards condition, all that could be desired, it is mostly due to the intrinsic value of the Webb South-Downs, and in spite of bad management.

Before giving my system of management, by way of drawing out Mr. Nelson, in his second article on the peculiar advantage of a particular breed, I will reply to his first by saying that his assertion that "the Leicesters, Cotswolds, &c., are more hardy than South-Downs," is so entirely contrary to the experience and the opinion of those that should know, that I suppose it was a slip of the pen, and that Mr. Nelson did not mean it. And again, that they are "more prolific." I suppose Mr. N. spoke before he thought. Going outside my own flock I may mention that Mr. Thomas Bell brought six of his South-Down ewes to my place to be served by "Frank," in the fall of 1857—the six ewes produced twelve lambs. The same fall Mr. Forman had two served by Frank, which produced four lambs. In the fall of 1860, John Worth of Chester Co., Pa., brought ten ewes to "Reserve"—the ten produced eighteen lambs. Last fall he sent three ewes to "No. 89"—a few days ago I received a note from him stating that the three produced seven lambs, two twinning, and the other had three. In the same note he says, "Young Prize's" ewes are mostly twinning, one produced three." Besides the above I have only heard of three ewes ever sent to my rams that had single lambs; and from South-Down flocks that I am familiar with I think I risk nothing in asserting that of every 300 lambs 200 are twins. This may be also the case with long wools, but I have never met a long wool breeder that claimed as much. In regard to the long wools making more mutton and shearing more wool, an answer would lead us into a long article, so I wait his second communication.

The first great point to be settled in sheep management *is the end to be reached.* It requires different management when the object aimed at is fat lambs for the butcher, from what it does if the object is to breed stock rams. I shall in my next therefore write a few lines on my own experience and observation in raising butcher's lambs.

Holmdel, N. J., March 25, 1862. J. C. TAYLOR.

P. S.—The inquiry about wool matters will be noticed after shearing my flock. J. C. T.

Percentage of Population Engaged in English Agriculture.—From the annual report of the Poor Law Commissioners to Her Majesty for 1860–61, it appears that of the industrial classes of England and Wales above the age of 20 years, there are—

Engaged in agriculture	16.1	per cent.
In mechanical arts, trade and domestic service	31.0	do.
In manufactures	8.4	do.
In mining and mineral works	6.3	do.

Management of Farmer's Clubs.

The recent description in our columns of the system on which FARMERS' CLUBS in Great Britain generally conduct their meetings, has elicited a letter from the President of a similar institution in Massachusetts, enclosing a copy of its constitution and programme of operations for the current year. We publish them both below, as a model of systematic arrangement and energetic effort for all other organizations of the kind.

G. W. CHASE, Esq., to whom we are indebted for this information, mentions in his letter, that a copy of the programme is furnished in advance to each member of the Club, and the committee appoint beforehand some one to open each discussion. But the "*Field Days*," as they are termed, are regarded as a peculiarly profitable and instructive, as well as possibly an original, feature with this Club:

"The plan is this: May 5th we meet in the evening at the house of A. B. for our regular monthly meeting. On the *afternoon* of that day, as many of the members of the Club as can do so, meet at the same place, and spend three hours or so in looking over the farm. The object is mutual consultation and observation, with a view to mutual improvement. A. B. may have his doubts about what to do with a particular piece of land, or about the propriety of certain changes in his buildings, and he improves the occasion by getting the combined opinions of his brother farmers upon the subject. This is at once a convenience for him, and may, perhaps, save him much perplexing thought, and even time and money; and is also a means of pleasure and profit for his visitors. Those of his visitors who live at a distance,—and such others as choose,—are invited and expected to take supper with A. B., and be on the ground for the evening meeting. Those who cannot attend in the afternoon, come just after supper, or not until evening, as they may find it convenient. In the fall, it is sometimes desirable to visit several different farms or gardens in a single afternoon, to examine fruits, &c., under the various conditions of soil, location, and culture, listening the while to pithy observations upon the qualities, habits, adaptation of soils, best fertilizers, and the many points of interest connected with the subject. The practical value of such "Field Days" can hardly be over-estimated."

Of the "Market Day and Fair," Mr. C. remarks that it includes "an exhibition of stock, fruits, vegetables, and flowers, with small premiums for the best of each. The premiums are paid by receipts for admission fees to the exhibition,—the deficit, if any, being made up by previous guarantee subscriptions."

Constitution of the Haverhill Farmer's Club.

ARTICLE 1. This Association shall be known and styled as the "Haverhill Farmer's Club."

ARTICLE 2. Its object shall be to increase the interest and knowledge in Agriculture and Horticulture.

ARTICLE 3. Its officers shall be a President, three Vice-Presidents, Secretary and Treasurer, and a Reporter, who shall be chosen annually, on the first Monday in March, by ballot, and shall constitute a Board of Directors," with full powers in all matters relating to the Club not otherwise provided for.

ARTICLE 4. The Club shall hold regular monthly meetings, on the first Monday evening of each month, and also weekly meetings, during the fall and winter months, at which the exercises shall be such as may from time to time be agreed upon.

ARTICLE 5. Any person may become a member on recommendation of the "Board of Directors," paying the sum of one dollar, and signing this Constitution.

ARTICLE 6. This Constitution may be amended at any regular monthly meeting by consent of two-thirds of the members present.

Officers for 1862–63.

President—GEO. WINGATE CHASE.
Vice-Presidents—George Coffin, James T. Gile, Kendall Shattuck.
Secretary and Treasurer—Charles Corliss.
Reporter—David Boynton.

Subjects for Discussion.

1862.

March 14. Fruits.
do. 17. Drainage.
do. 24. Farm Implements.
do. 31. Management of Farm Stock.
April 7. Manures—comparative value, preparation and application.
do. 14. Comparative value of Horses and Oxen for farm work.
do. 21. Sheep—breeds, management, &c.
May 5. FIELD DAY. Preparation of the Soil.
June 2. FIELD DAY. Pruning.
July 7. FIELD DAY. Grasses.
August 4. FIELD DAY. Rotation of Crops.
Sept. 1. FIELD DAY. Gathering and Preserving Fruit.
do. 18. MARKET DAY AND FAIR.
October 6. FIELD DAY. Small Fruits, kinds and culture.
do. 15. Transplanting Trees and Vines.
do. 20. Apples—kinds and culture.
do. 27. Is Farming Profitable?
Nov. 3. FIELD DAY. Pears, kinds and culture.
do. 10. Farm Stock—comparative value of breeds.
do. 17. Seeds—how to raise, preserve and select.
do. 24. Milch Cows.
Dec. 1. Grapes—kinds and culture.
do. 8. Influences of the Atmosphere on Soil and Crops.
do. 15. Experiments that we have made.
do. 22. Poultry—breeds and management.
do. 29. Farm buildings—their arrangement and construction.

1863.

Jan. 5. Adaptation of Soil to Crops.
do. 12. Rural Embellishments.
do. 19. Garden Vegetables—kinds and culture.
do. 26. Diseases of Trees and Vegetables.
Feb. 2. Farm Economy.
do. 9. Flowers and Ornamental Trees.
do. 16. Noxious Insects.
do. 23. Are Birds more serviceable than injurious to farmers
March 2. ANNUAL MEETING.

We are not surprised that Mr. CHASE should add, in conclusion, that the Meetings of this Club are well attended and that its Members are "unanimous in favor of their practical value and general interest."

[For the Country Gentleman and Cultivator.]

OIL THE "OLD HARNESS."

MESSRS. EDITORS—many farmers seem to think that the "old harness"—the one they use for ordinary farm work—needs no care. If a strap breaks, it is *toggled* up with a leather or tow string, but cleaning and oiling is out of the question. This ought not so to be. If the "old harness" is cleaned and oiled twice a year, it will last as an "old harness" a long time—twice as long as it would if neglected. Now is the time to do this job, before spring work comes on. It should be washed clean in warm water—not soaked *too much*—and allowed to become partially dry, and then thoroughly oiled with neats-foot oil. The oil should be warm when applied. A good way is to set the dish of oil into another dish containing hot water. In this way the oil can be kept warm during the process of oiling. A little ivory-black mixed with the oil is an improvement. If the harness needs mending, let it be done after washing, and before oiling. Every one ought to have an awl, wax, thread and *gumption* enough to mend the "old harness." "A penny saved is two pence earned." J. L. R. *Jefferson Co., N. Y.*

[For the Country Gentleman and Cultivator.]

THE EASY WASHER.

MESSRS. EDITORS:—I noticed in THE CULTIVATOR, an inquiry about the Union Washing Machine—also one person that recommended it as being good. Now I will contribute my mite about washing machines. I have tried a number of washing machines, and have never found one that answered as good a purpose as the "Easy Washer." It does the work well, and does not wear the clothes *one-half* as much as a wash-board will. It is truly what it is called, the "Easy Washer." It is easily worked—so easy that a child can work it, and it will wash the dirt all out that can be rubbed out on the wash-board. It is light to handle, does not take up an unnecessary amount of room, and its cost is trifling ($5), compared with most machines. There has been some twenty or twenty-five of the Easy Washers sold in our town, and they all like them. The universal exclamation is, "I would not sell it at any price if I could not get another—I can get my washing done so much quicker and so much easier too." I think they are durable, and that is one good thing for me, for I cannot afford to buy a new machine every moon. I have had mine more than a year, and it has been used every week to wash for a family of six persons, to do all sorts of washing, from fine clothes upwards to bed clothes—in short all sorts of washing that a farmer's family has, and it is just as good for what I can see, as it was when I bought it—in fact, I would not carry it a mile to exchange it for a new one. J. C. *Brookfield, Conn., Feb.* 13, 1862.

AGRICULTURE OF IOWA.

From the Report of Mr. Duane Wilson, Secretary of the Iowa State Agricultural College, we derive some facts as to the Agriculture of that State, which may be of interest to the readers of the Country Gentleman.

The area of Improved Land in the State of Iowa, which was a little over two millions of acres in 1856, is now computed in round numbers at four millions. The following estimate is given of the aggregate production of the leading crops for several years past:

	1856.	1858.	1859.	1860.	1861.
Wheat, bu., ..	5,469,516	3.293,253	7,799,088	19,491,712	18,350,000
Corn, do. ..	31,163,352	23,366,684	44,374,320	56,161,215	60,000,000
Oats, do. ..	6,127,329	1,703,760	2,000,000	2,500,000	10,000,000
Potatoes, do..	2,014,388	1,497,204	1,800,000	2,200,000	2,000,000
Sorghum, gals.		416,774	1,079,725	2,000,000	3,000,000

The farmers of Iowa have probably twice as much unimproved land on their farms, as there was actually employed for cropping, or about eight millions of acres. Mr. Wilson remarks that the cost of this can hardly have been less than $2.50 per acre, or twenty millions of dollars. This capital now lies idle, and as money is there worth 10 per cent., there is a consequent annual loss of two millions of dollars from this source to the farmers of the State, together with the taxes they pay on these lands of $225,000 more. Mr. W. then puts the pertinent question—

"Would not the owner of unimproved lands do better to rent the lands for the taxes, than permit it to lie idle, or sell it now for half the cost, and invest the proceeds in needed improvements on the cultivated lands, where he would realize from 50 to 100 per cent. annually? There can be but one reply to these queries when applied to the whole State. There are doubtless some who will cavil at these conclusions, and contend that as the improvements on lands enhance the value of the wild lands contiguous thereto, the persons making these improvements should have, as far as possible, the advantage of that advancement. Of what benefit can it be to such when they are unable to sell or cultivate them, and may not do so for years? Better to cultivate thoroughly what they are able to manage by their labor and means, and thus increase their products, than to rely upon supposed advantages in the far off future."

This is an argument worthy of thought. Of course it cannot be expected that the ninety or one hundred thousand farmers of Iowa should now be either willing or able, as a whole, or as a general thing, to act in accordance with it; but to those who do have opportunities to rent or sell their surplus land, this course seems much more in accordance with true economy, than to endeavor to carry such a burden of unproductive capital. And to emigrants going to the West, Mr. Wilson's observations are a useful warning; while interest *may* eventually be made and farther profit beside, in the increasing value of the land, few have capital enough to wait during the intervening period for what is at best a matter of some uncertainty. In the attempt to do so, how frequently loans may have to be made at most usurious rates of interest, which will rapidly swallow up the value of the land, both present and prospective. It must be much the wiser and safer system to begin with no more land than can at once be compelled to pay its own way, if not to return a profit; it can never be difficult to add to the size of the farm, as one's means of investment and of cultivation become really adequate to the undertaking.

☞ The Illinois Central Railroad Company expect to distribute about 750 bushels of Cotton Seed obtained by Government agents in Tennessee, for trial among farmers on their line of road in Southern and Central Illinois.

A Day at Thorndale and Waldberg.

Last week we had the pleasure of spending a day at Thorndale, and another at Waldberg. The snows were fast disappearing and the frost leaving the ground, but the Spring must be quite backward all along the Hudson. The Short-Horns at Thorndale have wintered finely, and are in thriving order. The root-cellar is not yet exhausted, and evidently contributes much to their health and welfare. Mr. Thorne has a new Catalogue in press, which will show the present constitution of the Herd to better advantage than any notice of ours, and we mention the fact for the benefit of those especially interested. In the course of conversation, we were glad to ascertain that the past year, although justly characterized as "dull" for sales of improved stock, has not been without good reason for encouragement in the continuance of that close attention and well directed effort, of which the Thorndale animals afford so abundant proof; and, in point of fact, the herd shows no surplus over its usual numbers, and the demand appears just about to keep pace with what it can spare.

At Waldberg, the residence of Hon. A. B. Conger, there has been a vast expenditure of labor since our last visit, in clearing up, fencing and draining the fields, in adding to the farm buildings, and in replacing the sad loss occasioned by the fire of 1860. Our readers already know how extensively Mr. Conger is concerned as a breeder, having a Devon and an Ayrshire farm as well as a Short Horn establishment; and we may add that he also is preparing a Catalogue, which will be of unusual interest, not only from the number of animals it will include, but from the attention which Mr. C. has devoted to systematizing and completing the pedigrees of the Short Horns, upon a plan devised by him expressly to facilitate the tracing back of the different strains of blood combined in each, through the most celebrated of its ancestors on both sides. Thus the work will rank rather as a contribution to the history of the breed than merely as the register of a single herd.

Just where the Palisades on the western bank of the Hudson begin to soften from precipice into hilly pasture, Mr. Conger has a shore line of more than two miles' length—his land stretching back over the bold range of highland with which Rockland here looks down upon the vineyards of Croton Point and the broad waters of Tappan Sea—the main extent of the farm thus lying beyond, and mingling its outflow with the head waters of the Hackensack instead of the Hudson. Upon an estate of such size—more than sixteen hundred acres—of land that has been under the improvident farming of several generations, it is no small task to replace confusion with system, and partial exhaustion with fertility and productiveness. To this task, however, Mr. Conger has devoted himself with untiring energy, and with a degree of liberality as well as zeal, which have few parallels in our agricultural history. It is his earnest desire and hope to prove eventually that the capital thus invested in the soil will not be without returns; and, whether this end may or may not be attained, he will at least have made his mark upon the progress of the County, and placed before the farmers of the State an example of *faith* in improvement, testing in practice the means of its accomplishment, and throwing the light of his experience upon their results.

Speaking of Roots, which Mr. Conger, as well as Mr. Thorne, grows upon a large scale, we saw the next day, at the warehouse of Haines & Pell in New-York, a new and very promising little implement to facilitate their culture. With several knives on each side of the row, pushed forward by a long handle, it must quite thoroughly dispose of the weeds, and leave the ground loosened up and much benefitted by the operation.

Wintering Cattle---Stables, Water, &c.

It it an old maxim, that stock well summered, are half wintered. Stock that come into winter quarters in a lean condition, require extra care and feed to be brought to grass the coming spring in a fair condition. Although we have passed mid-winter, still the most critical time to care for stock is to come.

I cannot better give my ideas on the subject of this than to give my practice—the result of many years of care and observation.

I aim to cut my grass when the saccharine matter is most fully developed, before the seed is ripe, the leaf decays, or the stalk takes on the woody nature. Grass partly made, I put up over night, and open next day, to prevent its bleaching by dew or rain, believing the extra labor is more than compensated by the better quality of the hay. I sort my hay (that is by loads,) in filling my barns, putting that of an inferior quality or damaged, where it can be fed in early winter when the bracing air gives stock a sharp appetite, reserving the better qualities for the latter part of winter and spring, when, from long feeding on dry food, their appetites are more delicate. In this way there is no difficulty in using up your several qualities of hay without any unusual loss of flesh.

Another important consideration—after your hay is well secured, so that you can get at the different qualities when you choose—is warm and convenient stabling.

I have cared for stock in most of the different kinds of stabling that have been in use during the last fifty years, and as the result of my experience, have adopted the following plan, all things considered, as the best:

I have constructed a stable for cows seventy-six feet long and fifteen wide, holding twenty-five head, running the whole length of one side of my cow-barn. The outside is covered with two layers of three-fourth inch boards, breaking joints, and has five six-light windows.

The sleepers on which the floor is laid, rest on stone butments, sunk in the earth so as to rest firmly, and are entirely disconnected with the sills, so as to prevent any decay from the urine of the animals, the thickness of floor only coming above the under side of the sills. I lay a tier of short plank crosswise of the stable, four feet long, resting against the outer sill. I then lay the tier of long plank on which the cattle stand and feed, the lower end resting on the short plank, making an offset of two inches for the droppings of the stock, and four feet and three inches wide, the sill included. I give the floor a descent of one inch in three feet, which is sufficient to carry off the water and not retard their efforts to rise.

I put the bed-piece for stanchions four feet and ten inches above the drop for manure, leaving five feet six inches in front of stanchions for feeding. I lay the floor from seasoned plank with care, and battening on the under side the joints in the feeding alley, so that no feed will fall through. I have seen stable floors so open that creatures might as well lay on a coal-grate as the floor for warmth. I fasten with stanchions locking on both sides the neck. This may not be as easy to the animal as ropes or chains; but leaves them more cleanly, which is an important item with a dairy. With chains the cow will go forward to eat, and while so doing drop her manure; then back up and lay down in it, keeping themselves constantly filthy.

I do not feed at once enough for a meal; but as fast as they eat the first given them, repeat the feed till they are satisfied. In this way there is not much refuse. I turn them out at 9 A. M., and tie them at 3 P. M., in ordinary weather. This gives them time to water and necessary exercise. I do not feed anything broadcast in the yard except some refuse hay, straw, &c. As spring opens and days increase in length, I turn them out earlier, put them up and feed at noon, and then turn out till night.

In feeding stock broadcast in the yard or field, you lose all the finer particles of the hay, which is the most delicious part of it; and if you chance to feed in excess, it is trodden under foot and lost. Free access to water is indispensably necessary; and if you can have running water in a trough near by, it is all the better.

We often see stock obliged to go to some ravine to drink, with the bank of trodden snow so elevated on the bank above the water, that we are reminded of the story of the man who was found holding his cattle by their tails like a dipping candle, that they might allay their thirst. Light and ventilation are important attachments to stables. The former is always needed without any regulation; the amount of the latter needed depends upon the temperature of the weather, or the stagnant or free circulation of the air.

In penning the above remarks, I have not the vanity to think that I have arrived at perfection on the matters discussed,—but have done it believing that good may result from a comparison of notes among farmers, by their giving their mode of conducting the same branch of agriculture, and hoping always to receive more useful instruction than I impart. Hiram Walker. *Mexico, N. Y.*

Remarks on "Raising Apple Trees."

Eds. Co. Gent.—I would like to say a few things for the benefit of "P." of Salisbury, Conn., "or any other man," about embarking in the nursery business. You recommend Barry's Fruit Garden, and Thomas' Fruit Culturist; these are both excellent works, but the world moves, modes change, and the nursery business progresses.

In raising apple trees I think I can say something new. Grafts should be set out in ground well enriched, and worked *very deep.* Set them two to two and a half inches apart in the rows, two rows within four inches of each other, and then leave a space of three feet and a half; this is what I call *double rows.* Mark off the rows at four feet apart, by stretching a rope and pressing it into the soil so as to leave a mark. To plant the grafts, have a good spade, the blade of which is twelve inches long by seven wide; one man uses the spade in the following manner: thrust it nine or ten inches into the soil, so as to have the spade extend equally on both sides of the mark for the row, now push the spade from you, and then withdraw: this operation will leave a wedge-shaped hole ten inches deep, seven wide, and about two broad. It is necessary to have another man to put in the grafts; he should put in two, each two inches outside of the mark left as a guide, holding them till the first or spade-man repeats the operation with the spade, which will be about two and a half inches from the edge of the first hole. In making the second, the soil is pressed against the grafts in the first, and thus the operation not only makes the new hole, but closes the last, and while the spade is being withdrawn, the second man gets the grafts for the new hole. There is no time lost from one operator waiting on the other; men do not tire at this work as they do at dibbling; it does not make the hands sore—the operators can change places, and will do more work than with the dibble. Set the grafts with only an half inch above ground.

First Year—The grafts should be well tended, all weeds kept down, and the ground loosened. After they have grown an inch or two, *sprout* them; this consists in taking all the sprouts off but one, the best. In the fall they should all be taken up and stored in the root-cellar, and during the winter trim the roots and top, the top cut to within an inch of where it started; the roots should be trimmed small enough to enable you to plant them in the nursery row with the spade.

Second Year—Plant these yearlings in the nursery the same as the year before. Rows four feet, plants one foot apart in the row, leaving an inch above ground. Sprout as before. In the fall and during the winter, trim them to *whips*—that is, leave only one strait shoot.

Third Year—Let them grow as they may. In fall and winter, trim to *whips* and top at four feet.

Fourth Year—During summer trim off any limbs too low on the trunk to belong to the head. In the fall you will have trees that you need not be ashamed to have people see before they purchase.

Allegheny City, March 22, 1862. J. HERON FOSTER, Jr.

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[For the Country Gentleman and Cultivator.]

Sheep and Wool Growing in New-Hampshire.

Messrs. Editors—A correspondent, "W." in the Co. Gent. of 13th Feb., furnishes us an interesting article on "Sheep and Wool-growing in Madison county, Ohio." Near the close of his communication, he expresses the wish "that others in the wool-growing trade, East and West would give us their experience, profits, &c."

Having recently visited some of the wool-growers in this (Merrimac) county, and taken "a few notes by the way," I here give the results.

Wool-growing in this section of the Granite State has become a prominent branch of farming. Many of our farmers have been long engaged in sheep-rearing. Those who have persevered in the business, have been very successful in a pecuniary point of view, realizing much greater profits from sheep husbandry, than they could have done from any other branch of farming. Notwithstanding the occasional fluctuations in the market value of sheep and wool, the number of sheep has been greatly upon the increase here for some years past, and there has probably been a corresponding decrease of cattle.

Experience has fully demonstrated the fact, that sheep will do much better on our old, long grassed pastures, and better keep down bushes, briers, &c., than cattle. Besides, they will winter better on a poorer quality of hay, if they are regularly fed with a moderate allowance of grain or roots.

Almost the *entire* of sheep kept here, are of the Spanish Merino breed and their grades. Many of the flocks possess all the requisites that constitute No. 1, fine wooled sheep.

Among the more prominent of our flock masters, are several by the name of Couch; they all reside in the same neighborhood. Some of their farms are in this town, some in Salisbury and others in Boscawen, yet they all reside within a sweep of less than a third of a mile. The number of sheep kept in this small circle numbers 1150—with the usual proportion of cattle, horses, swine, &c.

John Couch jr., and son (Warren) have 400—having the past year purchased a considerable number of wethers and selling about the same number of ewes. They sheared last June 300—the fleeces averaged 5½ lbs.—which they have just sold at 49 cents per pound. By purchasing in Vermont prime bucks of the Atwood stock, and careful selection of breeding ewes, they have double the weight of fleeces, and greatly improve the quality of the wool, and the size and value of the animals. From the 300 sheep sheared last June, they have received for wool and sheep sold $1,040—selling sixty of the poorest of their ewes at $3.75 per head—raised 106 lambs, a large portion of which are of the pure Atwood breed.

Several years since they commenced the improvement of their flocks by purchasing pure bred bucks in Vermont, having in the time purchased five, for three of which they paid $100 each, one at $50, one at $25. They now have a superb buck, ten months old, which they purchased of —— Sanford, Orwell, Vt., a few months since, for which they paid $100.* The Messrs. C.'s are fully satisfied that it is more profitable to make use of these high bred and high priced bucks, than to make use of ordinary or $5 bucks.

They estimate the cost of wintering a sheep, per head, from $1.10 to $1.35. Pasturing, shearing, &c., &c., at 58 cents per head.

They prefer to have the dropping of the lambs commence about the 20th of March. This winter they are feeding corn and oats, the two preceding winters they have fed corn and beans—the latter obtained in Boston and costing one dollar per bushel at our railroad depot. For breeding ewes they prefer beans to any other provender they have ever fed. But in consequence of the high price of beans last autumn, they purchased none.

Samuel Couch and sons (Henry and Charles,) keep about the same number as John and Warren; their sheep and management about the same. This winter they fed corn and oats one day, and turnips the next. Their fleeces average two ounces higher than John's—from 290 sheared last June, they have received $1,160, and they estimate their flock to be worth $200 more than it was a year ago, and the same in regard to John and Warren's flock. They estimate the value of their ewes at ten dollars per head, or in other words would not sell an average lot at a less price. They are satisfied that sheep improve their pastures, and that they can improve their farms by keeping sheep, quite as well as by keeping cattle. They also consider the manure of sheep from a given quantity of hay consumed, worth more than that from cattle—that is, as cattle manure is usually managed by farmers. They use no litter in their sheep hovels till the sheep commence dropping their lambs, then they are kept well littered with straw, &c.

The manure in the spring in the hovels, is worked over and pulverised, applied to the land and immediately plowed or harrowed in; by this process heating and fermentation, if any, takes place in the soil.

Woodbury and Albert Couch, and others in the same neighborhood, have similar flocks with those described; management very similar, attended with similar results, in a pecuniary point of view, which by the way, are very favorable, as their neatly, well finished and furnished houses, large barns, and convenient out-buildings and generous hospitality fully prove.

In another section of Salisbury, I visited the farm of George Quimby. His flock contains 200 very fair fine-wooled sheep, which he manages with skill, not having lost more than one sheep in a hundred, annually, for the past four years. Every sheep of his flock is numbered, (and so are the Messrs. Couchs') and each fleece is weighed as soon as it comes from the sheep, the weight of the fleece entered upon a book opposite the number of the sheep. By pursuing this course for a number of years past, and selecting the heaviest fleeced ewes for breeding, he has been able to greatly increase the size of his sheep and weight of fleeces, obtaining more wool from 200 sheep now, than his father did from 350, a few years ago.

In 1840 the fleeces averaged 2 lb. 6 oz. In 1849 averaged 3 lb.; in 1856 4 lb.; 1861 averaged 4 lb. 11 oz. This increase of wool has been effected by careful selection of breeding ewes, and making use of good bucks, though he has not used any of the $100 ones. He raises from 60 to 100 lambs annually, selling an equal number of ewes and wethers.

There are some facts connected with Mr. Q.'s management worthy of note. His hay being mostly upland of good quality, he neither feeds grain or roots to his sheep. His pastures are good, and the lambs are not dropped till into May, or after the sheep are turned to pasture.

From 1845 to 1858, he purchased from ten to twelve hundred dollars worth of hay, costing from 8 to 10 dollars per ton. Most people suppose, if the purchased hay had been fed to cattle, he would have lost money by the speculation. But the very reverse has happened in his case. Within ten years he has doubled the hay crop on his farm, and largely increased the amount of his grain crops. His house, barns, out-buildings, &c., are large and well finished. His well managed flocks have been the basis of his success in farming, although he has kept a fair stock of cattle during the time. I am happy to say there are thousands of other farmers among the hills of New Hampshire equally successful and prosperous in the wool-growing business, as those I have noticed here.

Warner, N. H. LEVI BARTLETT.

* * *

Wheat and Guano.—The Genesee Farmer says, if we could get $2 per bushel for our wheat, guano might be used for this crop with profit. At $1 it barely pays, except in rare instances.

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* The buck was weighed in my presence, weighing 114 lbs.

[For the Country Gentleman and Cultivator.]

RAW AND "SEASONED" MUCK.

"To realize the full benefits that may be derived from the use of muck, it is important that it should be dug from the swamp and piled on dry ground some months before using it in compost, and if it could thus lie for one or two years, so much the better. While in the green and wet state, the vegetable matter of which it is composed is more or less locked up in acids deleterious to cultivated plants, and is therefore unavailable to them as food, and its qualities as an absorbent are but in part developed. But give it age, and the water and acids will in a large degree pass out of it, so that it is lighter and every way more convenient for handling, and better for becoming the food of plants; and being thus dry and finely pulverized, it is, next to pulverized charcoal, the best absorbent of the liquids and volatile matters of manure that we can employ."—Hon. F. Holbrook.

Artemas Newell, Esq., of Needham, who has used muck largely in various forms, in a letter published in the Transactions of the Norfolk (Mass.) Agricultural Society for 1861, remarks, "The muck should be dug from its bed late in autumn, and be fully exposed to the frosts of winter before it is used. The reason why I prefer to have it dug at this season is, that if dug earlier and left on dry land, it sometimes becomes hard, like dry peat, and is, in fact, better for fuel than for manure. I deem it a waste of labor and money to use it in combination with potash or alkalies in any other form until it has been thus exposed and prepared."

We quote the above paragraphs as introductory to some remarks, partly suggested by the inquiries of Mr. W. J. Pettee, in the Co. Gent. of March 13, p. 169.

For several years past we have given considerable attention, both theoretically and practically, to the use of muck in various forms. One of our experiments had some resemblance to that of Mr. P.; its results may be worthy of statement. Having three years ago, a quantity of manure under our cattle sheds, still in a nearly fresh state, we made in July some seventy-five or more loads of muck and manure compost. The muck was drawn fresh from the bed in a partly dry state, and placed in layers with the manure, each six to eight inches deep, in the proportion of two loads of muck to one of manure. The heaps were piled about four feet high, and eight feet wide, and twelve to fifteen feet long at the bottom, but of course of less size at the top, and the material, except the first layer, thrown on from the wagon with forks and shovels, so that it might not become too compact for decomposition.

The first heap, made up mostly from surface muck pretty well pulverized, fermented considerably, and was used upon fall wheat in September. There were, however, occasional cakes of muck which were unchanged, only the fine black portion seemed to be acted upon by the contact with the manure, and so far both were homogeneous or materially alike in action and character.

Other heaps made in larger proportion from the lower strata of muck, were left over until the next season, and then used as a surface fertilizer (mixed with the plowed soil by harrowing,) for corn and oats—the latter seeded to clover. A considerable portion of this muck remained unchanged in character even though quite finely broken, and was of very little value as an addition to the manure. On the oat ground the clover was much better where the dressing was applied, but this was no doubt owing mostly to the manure; and the next season a large growth of sorrel overtopped the clover for a while, the result of the acid still present in the muck, which in its original bed produced little else than this weed over a large share of its surface, and the deepest deposit of vegetable matter looked like the moss seen in some swampy springs, and was still sour to the taste and smell to a remarkable degree, especially when first opened.

The next season we formed of the same kinds of muck and manure a larger heap, intermingling the material by driving over the pile with the wagon and spreading it therefrom. This saved considerable labor, but made the pile so hard at the bottom that no fermentation took place. After using the surface, the balance lay over until the next spring, when it was thoroughly mixed with the plow and harrow. This was afterward used as a hill dressing for potatoes with very good effect, also for mixing with hen manure as a fertilizer for corn in the hill.

One year (1856, I think,) one of our muck ponds became very nearly dry, so that by plowing and scraping we drew out a famous pile of muck. This deposit has very little acid in its composition compared to that named above, and was used with better results—decomposing far more easily and acting more readily in the compost heap. It was however less valuable than it would have been had it not been trampled so hard while dry by the team passing over it in scraping out, and by the stock afterward, so that the "seasoning" was less effective than it would have been had it lain in a lighter state. Muck should either be piled lightly in heaps, where cattle may not trample it, or be spread over a considerable surface, so that it may be frequently and thoroughly stirred by the plow. The latter treatment is to be preferred. Then, when well dried and aerated, it is in fine condition for storing where it can be got at through the winter, for mixing with manure, for use as bedding, and as an absorbent in the stalls of cattle and horses, which would thoroughly compost the two materials, making a large supply of manure of first-rate quality. Of this particular mode of treatment, however, we cannot speak from experiment, but we have abundant evidence of the truth of the statement, and we hope to give it practical test ere long.

We might recount other facts in regard to the best state and manner of employing muck as a fertilizer, but our remarks have already over-run more space than we intended. It is a subject of great interest to every farmer who has these muck beds within his reach, as he may thereby largely increase the products and profit of his farm. *

Hints about the Planting of Potatoes.

The following excellent extract, conveying some useful hints with reference to the distance apart at which Potatoes should be planted, the depth at which they should be put in, the employment of whole or cut tubers for seed, and the time of planting—forms part of a recent article in the *Scottish Farmer :*

Our excellent friend, Mr. Robert Thomson, of the Royal Horticultural Society's Gardens at Chiswick, who has carried out more experiments on the potato crop than any other man living, in reference to the distance at which this crop should be set, thus writes:—"In the case of very strong kinds, it cannot be denied that quite as much produce may be obtained at 12 or 15 inches apart as at 8 inches, (*i. e.*, in the line ;) but, when the plants have much space, they are apt to produce tubers varying greatly in size, some of the first formation being much too large, while those of a later production are too small. In neither case are the tubers so good as when there is a more equal and middle-sized crop ; and it should therefore be the aim to obtain a crop of this description. If a sort is naturally inclined to grow too large, it is well to plant it rather closely in the row ; and it is better to do this than to limit the distance between the rows. It is much better to have the rows 27 inches apart, and the sets 8 inches asunder, than to have the rows 24 inches apart and the sets 9 inches from each other ; and this again is preferable to rows 18 inches asunder, and sets 12 inches from each other. In either of these ways the same number of sets will be required to plant a rood of ground ; but there is, in the greater distance between the rows, and the less distance between the sets, a double advantage—first, as regards the labor in planting ; and secondly, in a greater space for earthing up being afforded. When planted at the distance of 27 inches from row to row, the number of trenches required to be cut out is one-third less than when the rows are 18 inches apart; and when planting by the dibbler is adopted, one-third more ground has to be traversed."

Nor is the depth at which the sets are to be placed a matter of indifference; from a series of experiments carried on in the Experimental Gardens at Chiswick, the following results as to depth and produce per acre were arrived at:—

At three inches	in depth,	the produce	was....	13 tons and 14 lbs.
At four	do.	do.	do.	14 tons, 1 cwt., 18 lbs.
At six	do.	do.	do.	14 tons, 11 cwt., 4 lbs.
At nine	do.	do.	do.	13 tons, 0 cwt. 111 lbs.

The greatest produce, therefore, was at six inches in depth; at three inches the least return; while many of the sets at nine inches did not vegetate, or at least failed in reaching the surface.

Some uncertainty exists as to the propriety of planting cut tubers or whole ones, also whether the latter should be large or small. The Chiswick experiments show that the mean produce of two plantations, one made in March the other in April, of cut seeds, exceeded that from whole tubers by nearly one ton per acre. A crop planted in April with whole tubers was greater than that from cut sets, but the crop planted in March with cut sets gave nearly two tons per acre more than the whole tubers planted in April.

Large tubers, planted whole, are preferable to small tubers, because the former have larger and stronger buds than the latter, and, therefore, as reason dictates, the stronger buds produce the stronger stems, and greater number of leaves, and upon them the crop most indisputably depends. The eyes of potatoes are true buds, and in small tubers they are comparatively weak, and consequently produce weak shoots, and the crop produced from such is inferior to that obtained from plants originating from larger tubers, furnished with larger eyes; and this conclusion has been justified by the results of many years' actual experiments.

So also is the case, as already stated, with the secondary or tertiary shoots, which are produced from tubers kept till late in the season before planting, the strongest buds having sprung in the pits, and been rubbed off in the process of turning them over; so, again, the secondary, or next weaker buds, experience a similar fate; while the crop is left to depend on the tertiary buds, which are the weakest of all. Can anything, therefore, be more conducive to weaken the vital principle in the potato, and predispose it to the attacks of disease? This is the certain consequence of late planting, and together with the rapidity with which one potato crop succeeds another, even in what is called high cultivation, is, no doubt, an important element in rendering this plant so susceptible to disease as it at present is.

It has also been found by experiments carefully conducted, that sets taken from the points of the tubers and planted in March, have yielded a crop at the rate of upwards of three tons per acre greater than when the sets were taken from the base of the tubers. In the case of the kidney varieties, when cut, the incision should be made longitudinally, and not transversely, as in the latter case the set from the top would only have eyes or buds, while that from the base will have none.

This is the cause why crops of kidney varieties come up so unequally, one description of sets having buds or eyes, while the other has none, according to the way the tubers have been cut.

Of course, these hints are chiefly intended for garden cultivation, and for amateurs in particular, because, in gardens we as often see the same errors fallen into as in field culture, and our intention in throwing out these hasty observations is with the view of inducing some of our intelligent readers to give expression to their opinions, as it is a question which not only largely affects the agricultural interest, but that of society at large.

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Cement for Grafting.—The ingredients are: One pound of beeswax, one pint linseed oil, six pounds rosin. This cement will not run in summer nor crack in winter.

OLD ERIE.

[For the Country Gentleman and Cultivator.]

LIQUIFIED MANURE FOR GARDENS.

The "constant readers" of the Co. Gent. and Cultivator, will probably recollect that some years ago Mr. Edgerton gave us some account of the remarkable results which he obtained, in the growing of garden crops from frequent applications of manure in a *liquified* state, to the soil of his garden. Probably several of the readers of Mr. Edgerton's account have been induced, before this time, to provide themselves with a tank and watering can in their gardens, so as to be able to imitate his example, and secure a similar luxuriance of growth. Could the experiences of all those who have made trial of Mr. E.'s method of enriching a garden be collected together into one pamphlet, we presume *all* who should read it would be so thoroughly convinced of its good results, that there would be a still more general adoption of that or some similar plan of applying liquified manure to gardens, and probably also to orchards, lawns, and ornamental grounds. Market gardens, especially, would be provided with the means of applying fertilizers in the *liquid* state, if all the testimony which has been given and might yet be given in favor of this method of securing large and luxuriant crops, could be laid before the owners and cultivators of such gardens.

We submit, for the present, the testimony of an English farmer and market-gardener who has been employing a system of liquid manuring, for several years, on both farm and garden. After stating that the quantity of milk was increased fourfold in the dry portions of summer and autumn, he says—"I had five acres of market garden, chiefly in onions and carrots, which, with the irrigation, became the most profitable part of my farm. I tried it with rhubarb with astonishing results, as also upon celery and asparagus, with very great improvement in the quality as well as the quantity. I am satisfied myself that the principle (that is, the system of liquid manuring) is very important for market-garden cultivation, inasmuch as there appears to be a larger development of saccharine matter, and less of woody fibre produced than in plants grown under the ordinary system."

Those who would like to try this system in their garden should sink a hogshead into the earth in a convenient corner of their garden, and liquify guano, hen manure, cow-dung, urine, &c., &c., with from six to ten or more times their bulk or weight of house-slops, suds or soft water, and after thorough stirring to secure a solution of all the fertilizing elements, allowing the solid or sedimentary portion to settle to the bottom, apply the liquid by a watering can, hydropult, or other apparatus, to the crops after or about sun down.

The communication of Mr. Edgerton referred to in the commencement of this article may be found in Co. Gent., Dec. 28, 1854, and in Cult., Feb. 1855. The heading of the article is "How to Enrich a Garden."

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☞ R. Parsons, Esq., of St. Lawrence County, kindly sends us, charges paid, a sample of Maple Syrup of his own manufacture, and as he expressly states, *not* with a view to a public acknowledgment of its reception. But its quality is too good to be merely noted, as he suggests, "in a private memorandum," and he will therefore pardon our taking this method of proving that its merits are appreciated.

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Tight Barns and Barn Cellars.—At a late agricultural discussion at Boston, the prominent practical farmers present took the ground that hay properly made is kept best in *tight barns*, and not those with cracks between the boards; and also that barn cellars were not injurious to the hay above, if well ventilated through wooden tubes passing up to the roof, and with tight floors—muck, &c. being used for composting the manure, and preventing the escape of the gas

HEN MANURE---COMPOST &c.

I have about 30 bushels of hen manure, and about the same quantity of ashes, that I wish to apply to my corn crop the coming season—soil a clay loam, a five year old timothy sod, plowed eight inches deep last fall. How would you advise me to use it? I have also a heap of stable manure made from my cows this winter—the pile is about 20 by 40 feet, 5 feet high I wish to use it as a top-dressing for rye next Fall, to be harrowed in with the rye. How can I keep it best? The pile lays out in an open field. I have used flax shives for bedding, removing them daily as they became saturated with urine, so that the pile consists of perhaps one-third flax shives.

Raymertown, March, 1862. N. V. N.

The hen manure may be managed in different ways. The easiest is to pound or reduce it to a powder, then mix it with the ashes, both being quite dry, so that the ashes will not act on the manure before it is buried. Then plant the corn with such a planter as Billing's, which drops concentrated manure at the same time the corn is dropped and buried, but with a small space of earth between the manure and seed, to prevent injury to the latter. Or, if such a planter is not at hand, drop the corn by hand in hills, cover it half an inch or so with earth, then drop a small handful of the mixture, (scattering it several inches about,) and then cover with a little more earth. Or a handful of the manure may be thrown down where the hill is to be, and quickly mixed with earth by two or three strokes of the hoe, and the corn then dropped and buried the usual way. Such manures are usually more efficient applied in the hill, especially on inverted sod. If the corn is planted in drills, a more thorough intermixture of the manure with the soil may be effected by first furrowing out the land, then strewing the mixture thinly along, and then drawing a one horse cultivator, set narrow, along the furrow. Or still better, attach a horse to a small log of wood, and drag it along the furrow, which will grind, pulverize and mix well together both manure and earth. The corn is then drilled in. Another way is to compost the hen manure with several times its bulk of fine loam or peat, but this is attended with more heavy labor in mixing and in application, which will be hardly compensated by the increased advantage.

The heap of stable manure, if already composted with large quantities of straw, scraped soil, &c., may lie as it is till autumn; but if not so composted, draw it out as near as practicable to the spot where wanted, and make it in equal alternate layers with loam or turf—the layers of each to be as thin as can be spread, to effect more thorough intermixture. By next autumn the heap will be valuable compost, which may be broken fine in the process of drawing and spreading.

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WASHING CORN.

The healthfulness of corn as an article of food is admitted by all, yet after it has lain for a few months in a crib infested with rats, cats, and other vermin, as is most generally the case, its *palatableness* becomes a matter of taste.

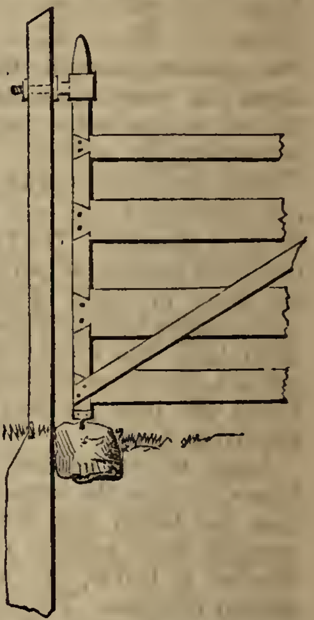
For several years we have been in the habit of washing what corn is used in the family, and find that it greatly improves it. Take a brass kettle or large tub half full of nearly boiling water; put in your shelled corn and let it remain for a few minutes, then stir it briskly with a paddle, and you will be surprised to see how yellow the corn, and how much better the puddings, Indian bread and johnnycakes will be.

Some wash the corn on the ear, but when the cob gets wet it is a tedious process to dry it. When shelled it will dry thoroughly in thirty-six hours. It should be spread two or three inches deep on some clean surface, in a warm room, or if in the summer, placed in the open air and stirred occasionally. "Try it all ye that ne'er tried it before," if you want *new corn* the year round. St. Lawrence.

[For the Country Gentleman and Cultivator.]

HANGING GATES.

Messrs. Editors—As the season is approaching when we shall want our fences and gates put in order, and as I have had for the last twelve years a certain kind of common gate hangings, such as I have not seen described in your paper or elsewhere, I will try and describe it, with a rough sketch of the same.



This is drawn merely to show it as plainly as I can. The iron work costs about 62½ cts. for a gate. When well made of good iron, in my opinion, it will last from one generation to another. The advantage of these trimmings is that the gate swings either way if the grade of the ground permits. The upper end of the heel post of the gate being rounded, it is easily unhung at all times by simply being raised out of the stone at the bottom. The hole in the stone needs to be only about half an inch deep. The round part of the eye, as shown in the engraving, which goes through the gate post, enables the eye to turn, and the gate is slipped out below. The section of the heel-post of gate shows that there is a band required to strengthen that part of the gate, having stubs of nails put in to prevent it from falling off in case of the drying or rotting of the gate post. The iron pin in the bottom may be of three-fourths or seven-eights inches, and about five inches long, say three inches in and two inches out of the wood. I generally unhang all my gates as soon as the winter sets in, and in the spring it takes but a short time to put all in order. Albert Van Voast.

Pond Grove, Schenectady.

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[For the Country Gentleman and Cultivator.]

COAL TAR AND ROSIN.

Messrs. Editors—Not long since an article appeared in one of your papers, inquiring whether coal tar and pitch applied to timber would preserve it from decay while under ground. The past year I have been experimenting with preparations of that kind, for the purposes aforesaid, and believe I have discovered a sure remedy or preventive of decay, which can be made as follows:

Take equal parts of coal tar and rosin; heat them until the rosin shall be dissolved and well intermixed with the tar; then apply it to that part of the timber you intend sinking in the ground.

To test the virtues of such a preparation, I took a sap shingle, split it in two pieces, one of which I smeared with coal tar and rosin; the other I left uncovered. I then drove them side and side in the ground. At the end of nine months I took them up, and found the progress of decay to have been very rapid in the piece uncovered, while the other was perfectly sound. This experiment fully convinced me of the efficacy of such a preparation, and if properly applied, I believe all kinds of timber would be rendered indestructable by decay. For posts I hardly think it necessary to cover more than twelve inches below and six inches above where the surface of the ground will come, as that part of the post is more exposed to the action of the elements, consequently needs the most protection.

I have not time or I would write more on the subject, as I consider it a very important one, and one of much interest to the farmer or real estate owner. And yet heretofore the preservation of timber has received but a small share of consideration in comparison with what has been said and written on other subjects. B. W. Rogers.

Bridgeton, New Jersey.

[For the Country Gentleman and Cultivator.]

Sowing Peas Broadcast or in Drills.

Messrs. Editors—Some time since Acer stated in the Co. Gent., that peas might be made a good fallow crop, by sowing some of the smaller kinds in drills, and keeping the weeds down by cultivating with a horse, and asks who will try it. I have been experimenting somewhat with some half a dozen kinds of peas, and have tried them both ways, sown in drills and broadcast, and have found that the large Marrowfat pea, sown rather thick broadcast, much the best to keep the weeds down; which they do by their quick rampant growth and thorough and complete occupation and shading of the ground. While the smaller kinds, by their slower growth, give the weeds a much greater chance; and especially is this the case when sown in drills. It is also quite difficult to keep the weeds out from among the peas in the row, as the peas have a very slight hold of the soil, and are generally leaning or laying many different ways, it is very difficult to hoe out the weeds without hoeing up more or less of the peas; while to pull up the weeds after they get much size, would be sure to pull more or less of the peas also. But the Marrowfat pea saves all trouble by keeping the weeds under.

Of course this applies more particularly to the more common annual weeds. Though a more limited experience leads to the opinion that there are few, if any, sown crops better calculated than the Marrowfat pea to get and keep the start of such weeds as Canada thistles, and the wire and quack grasses. Though of course the peas cannot be expected to kill or run out these pests. F.

Orleans Co., N. Y.

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[For the Country Gentleman and Cultivator.]

PRUNING GRAPEVINES.

Messrs. Editors—"Inquirer," in your issue of March 27, asks for information as to the best time to prune the grape. He objects to doing it in January or February, because we are subject to sudden cold snaps, exposing the young wood, causing death or imperfect fruitage. He finds best success, under pruning done in March, and believes the bleeding of the vines does not effect the crop. He wishes to be informed as to the experience of other vine growers. I shall endeavor to answer some of his interrogatories, by giving my experience upon the subject. I have been in the habit of pruning the first day of February. I leave my vines on the trellis on stakes during the winter, and have never had them killed back by the cold of winter. After the fruit has set, I summer prune very thoroughly, believing that few vines are able to carry the fruit and ripen perfectly the large mass of wood that will accumulate if left to grow. Summer pruning has much to do in fitting and maturing the young wood to stand the severities of our winters, and I apprehend the absence of it does more mischief than any pruning done in January or February. The multiplicity of cares in the fall have thus far prevented my trimming my vineyards before the closing in of winter. My theory is, that the fall is the best time, and for this reason—the sap which is the blood of the vine, returns to the root in the fall, so much of it only being supplied to the vine as is necessary to give vitality to it through the long cold winter. All extra wood left to be cut off in the winter or spring, is an unnecessary draught upon the life-giving forces of the parent stock, and impairs to a greater or less extent its vigor. Given spring pruning, and free bleeding of the vine, and the solution will be a feeble, sickly vine, small and imperfect, thin of fruit, and a growth of wood entirely unfitted to stand the rigors and changes incident to winter. It cannot be proved by any system of logic, that bleeding the plant will add to its strength, vigor or perfection. Otis F. Presbrey.

Prospect Hill Vineyard, Buffalo.

[For the Country Gentleman and Cultivator.]

TERRACED VINEYARDS.

Eds. Co. Gent.—I perceive that some of your readers felt a little disappointed at the opinion expressed in your No. of Feb. 13. Such a side-hill as your correspondent there speaks of, would indeed be impracticable. I cannot but think that he is mistaken, and has formed an opinion at random. We know of no hills as steep as 45°, unless composed of rock; such a descent could not be cultivated. At the same time I cannot quite subscribe to your opinion that "terracing is not suited to this country;" at least I have not found it so in my practice, having planted vineyards on terraced and level land, and always finding the result in favor of terraces. The soil here is a rather light loam, mixed with more or less gravel, and sometimes approximating to sandy. About twenty-five years ago I terraced a side-hill of this description, too steep for cultivation by the plow on account of the washing of rains. The field was well filled with natural grasses, forming a strong sward. Having no side-hill plow at command, I broke it up with the common plow, throwing the turf and soil down hill by repeated plowings, of course plowing one way only. Then with workmen furnished with common dung forks, selected or shook out the broken pieces of turf and laid them up like a wall at the bottom of the proposed terrace, without regard to much order as to which side of the soil was uppermost, and worked the loose soil down against this embankment until the upper or flat portion of the terrace was level. The terraces were laid 10 feet wide, and the grass bank required to be 2½ feet high, leaving fully eight feet or a little more for cultivation. The vines were planted in rows one foot from the bank. Finding the labor considerable in making a terrace so wide, I laid a part of them 8 feet, but found afterwards that the wider terraces gave the largest and best crops of fruit. The grass or sods thus promiscuously piled up soon commenced growing and formed a strong wall of green, requiring to be mown once at least every year, and is still strong and unbroken; it also requires re-trenching, by cutting the edge next the cultivated ground with a spade and turning under once a year; likewise the space between the edge of the grass and the rows of vines, and this I regard as the consequence of an an error in planting. Instead of setting the rows of vines on one side, they should have been planted in the middle of the terraces, which would have lessened the amount of hand labor, allowing nearly all to be done with horse and plow or cultivator.

At the time I made no notes of the cost of terracing, but my impression is that no very great expense attends the terracing of such land; a large portion of the work can be done with a good side-hill plow and team. If the ground is not seeded so as to furnish turf, then the embankments must be sown at once with grass seed. Our experience here is rather in favor of side-hill for vineyards, and terracing can be made the means of reducing much of the hilly slopes to a condition very favorable to the cultivation of other varieties beside grapes—such as dwarf pears and indeed nearly all the small or dwarfish kinds. R. M. Conklin.

Cold Spring, Long Island.

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[For the Country Gentleman and Cultivator.]

BEE-FEEDER.

For feeding bees, there is nothing more convenient than Eggleston's Patent Bee-Feeder. It is readily adjusted to any hive, and will work admirably. Not a robber bee can gain access to the honey; nor will the bees, while feeding, get drowned, or even get their feet fast in it. Yet the honey is always in reach till all is taken up. I have had one for two years. It is somewhat costly, but when one has but few bees, and wishes to get along with the least possible trouble in feeding his bees, he will find this arrangement just adapted to his wants. M. Quinby. *St. Johnsville.*

[For the Country Gentleman and Cultivator.]

MODES OF HARROWING IN WHEAT.

As winter wheat requires the protection in spring of a somewhat rough surface, as well as putting deeper into the ground, both on account of frost heaving, it will be understood as well as by the season of the year, that the few suggestions I offer below apply to spring wheat and other grain, but not to fall sown wheat.

There appears to be a difference of opinion as to the propriety of cross harrowing *after* the wheat is sown. I fully agree with J. L. R., that it is always—except the ground were very dry—best to harrow down smooth *before* sowing. I have pursued this course for twenty-five years, because when there is moisture enough to bring the wheat up, it cannot be put in too near the surface, if well covered. If the ground is not harrowed before seeding, about half the wheat rolls into hollow spaces, and when covered is about two inches deeper down than the balance, and so much deeper than is of any benefit to it. The same cause—inequality of surface—makes it patchy, or twice as thick in the low places as on the higher ones. And having to work its way up by unnecessary underground growth, weakens the growth to some extent.

But I have found another decided advantage from harrowing down before sowing. The seed that is covered nearest the surface gets the start in growth, and *maintains* it all the season. That which is covered deeper maintains about the *same* rate of growth, but does not ripen so soon, because it does not come up so early, and the deeper covered must grow *faster* than the shallow planted, to come up with the latter at maturity or harvest—and is consequently from one to three days later in ripening, thus causing an inequality in this respect at cutting time, that is sometimes quite perplexing in deciding when to cut. A piece of four acres which I harrowed twice before sowing last year, ripened more evenly than any one of six other pieces. The height of the wheat straw, also, was more equal. And it would follow from both facts, that the sample was more uniformly good, which is correct.

As to whether cross harrowing is not beneficial, I have strong doubts. My opinion is in favor of cross harrowing properly performed. The impression that it uncovers more wheat than it hides, arises I think from using the *same* harrow. Going one way the teeth throw up ridges; when they are crossed with the *same* harrow and same weight, the teeth going down about the same depth, similar new ridges are formed out of the previous ones, and wheat is thus unavoidably raised up and uncovered. But if the harrowing be well done, this will not happen to any injurious extent. But to do the work well there should be three harrows—or pairs if you have them—each of different weight and width between the teeth. I have for many years used three sizes of harrow in harrowing in wheat; and this was the general practice in England, I am assured, for a long time past, with understanding farmers.

I harrow down with the heaviest harrow before sowing. Then sow, and cross with a harrow that is lighter, with closer set teeth. Then cross this harrow course with a *light*, *one-horse* harrow. Mine has three-quarter inch *steel* teeth. The ridges and indentations of the heaviest and first harrow are largest. The second harrow—middle weight and sized teeth—does not reach so deep as the heavy one would, but fills up inequalities and levels down much more the larger marks of the heavy harrow. The light harrow still *works* the surface down, instead of thrusting up ridges as the heaviest one would.

The general result of using three harrows of graduated weight, and finer and closer set teeth, in proportion to weight, is a generally level and fine condition of surface mold as to the soil. The wheat comes up sooner, more evenly, and gets a more uniform and vigorous start, and a good start is very essential to maintaining the lead in a race of growth. For myself, therefore, I prefer to use harrows of three sizes across the course of one another; and sometimes I have, on rough ground, used the one-horse harrow twice in a place, crossing its previous course the second time; and I always find the essential work of *pulverization* and leveling—and consequently the covering of the seed by increasing the quantity of *fine* mold—much more complete from the same extent of labor performed in this manner, than I ever saw from harrowing in the wheat one way of the land only, and with the incomplete outfit of merely one or more harrows of about the same weight and general construction. I have already commenced putting oats in in this way, and will treat fifty acres of Club and Fife wheat in the same manner; for I consider using the same heavy harrows to level down the soil and cover the seed with fine mold, an inconsistent and incomplete mode of planting spring wheat, or any other spring grain. J. W. Clarke.

Green Lake Co., Wis.

[For the Country Gentleman and Cultivator.]

Weights and Measures of Corn--Hills vs. Drills.

Messrs Eds.—The article last summer under the head of "Tape Line in the Cornfields," gave a statement of the average number of ears in fields of corn planted on the usual hill system, and also in drills by a new implement called the gage.

The average of the first was about 36 in 33 feet, and 50 ears in the same instance by the latter—the King Philip (improved) ranging as high as 64.

This called out much good information from your correspondents, and in some of the articles the size of the ears was brought in question. Intimations were made that the drills would be inferior.

"Young Farmer," page 75 Co. Gent., corroborates this theory by notes of his experiment. It should be remarked, however, with regard to his experiment, that his drilled corn was only 8 inches apart, giving about twice the number of spears in the same distance as in hills. He says it took 115 ears of the drilled corn to make a bushel, (of ears I infer,) and only 83 of that in hills.

Now I have three lots of corn, old yellow corn of 1860 raised in hills, yellow corn of 1861 raised on same ground in drills, and improved King Philip raised in drills. This last is not well ripened; corn, our seasons are not long enough for this variety I fear. The two last are the drilled corn referred to for the large number of ears as it stood in the field. I have measured and weighed with much care till I arrive at the following average results.

I first found that 104 ears of old yellow eight-rowed, raised in hills, made one bushel, measuring after the manner of men—that is, guessing when the bushel is full—and it weighed 35 pounds.

Yellow eight-rowed of 1861, raised in drills—it took 93 ears, weighing 39 pounds.

Of Improved King Philip, 77 ears, weighing 33 pounds. This is not first rate, sound corn.

Owing to the uncertain quantity of a bushel of *ears*, the above shows only one fact, that the ears of my drilled corn of 1861 are larger than that in hills of 1860, and larger than that of "Young Farmer," in hills, in the rate of 83 to 87, which difference another selection of ears might reverse.

For getting at some more accurate and intelligible result, I assumed what a corn buyer told me was a fact in this State, and among the New-York dealers, that a *bushel* of shelled corn was 56 pounds. Assuming this standard, I shelled the corn till I had got just one bushel, 56 lbs. Of the old yellow raised it took 200 ears. Their weight before shelling was 67.16 pounds—cobs weighed 11.16 pounds. The corn shelled 31 quarts.

Of the yellow of 1861, raised in drills, 168 ears weighed 70.2 pounds, shelled 56 pounds of corn, measuring 33½ quarts. The cob weighed 14.2 pounds.

Of the Improved King Philip, from drills, 169½ ears weighed 72.6 pounds, shelled 56 pounds, measuring 32 quarts. The cob weighed 16.6 pounds.

Although this last variety has a larger cob and less weight per bushel in this case, yet the great number and length of its ears (sometimes 14 inches) would more than make up for the extra cob. I am very partial to this earing tendency; I can't see my way clear to a big crop with only four or five ears to a hill. If they grew two feet long, they would hardly equal the crops we read of.

Elmira, N. Y. TAPE LINE.

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[For the Country Gentleman and Cultivator.]

My Dairy---A Simple but Efficient Churn.

I keep from 12 to 15 cows, stabling them from Nov. to May—did this, however, only last winter and thus far this winter. Being deeply in debt and having no money, I concluded in the fall of 1860, to build a cow-house on the cheap plan. Hired man and myself built one at a cost of about $5, capable of holding 12 cows. We set up corner posts—plate on top and covered with straw. It works very well, being warmer than when covered with shingles. I fasten my cows with stanchions. My spring-house is 18 feet square, ballooon frame—studs 8 inches deep, boarded inside of building as well as outside, and the interstices or spaces tightly filled with dry saw dust—10 inches of saw dust over the ceiling—the floor is of brick, laid on 4 inches of gravel, and that is on 2 inches of plank, making the floor rat proof, but self-draining.

By using fine wire blinds for the windows in summer, I am not troubled with flies; and with plenty of cold well water or ice thrown on the floor, I am not troubled with the heat. I use a small tin bucket of hot wood coals occasionally through the day to keep the house warm in winter, and find no difficulty in keeping the thermometer at from 50° to 60°. I have only had the experience of this winter with it. I had no spring and could only study out a house like this. I have never been on a dairy farm, but suppose this kind of a milk house would not do for your New York dairies.

In churning I first tried a patent churn or two, then the old fashioned dash churn, but finding that, without horse power or other animal power, churning was a never-ending job, I laid all these aside, and made myself a square box 18 by 18 inches, hung it on gudgeons and frame, with one extension for a handle, and now have a churn which I have used daily for 8 months, and which, for ease of turning and *real efficiency*, cannot be *equalled* by any *patent* churn in New York. There are no paddles—"no *nuthin*" in it, being but a plain oaken box. The sides are the dashers. I have given it a full trial, and am satisfied that it is the true principle. I got the idea from "Flint's Milch Cows," a book by the way which I think every farmer ought to buy.

I have a corn cutter—home made—which is very efficient—never out of "kiltur"—but which I will describe, if you please, at another time. R. S. L.

Harrison. Co., O.

[Flint's "Milch Cows" is sent postpaid by mail on receipt of $1.25 at this Office. Eds.]

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[For the Country Gentleman and Cultivator.]

Introduction of the Potato into the U. States.

Messrs. Editors—To answer the inquiry of "A Co. Gent." of New Britain, Ct. as it is put, would be to say that the potato was introduced into America by the Creator "in the beginning" or since, as it is one of the indigenous productions of *South* America. But *the question* probably is when was it introduced into the United States? Answering that question in full will also explain why it is called the Irish potato, as was perhaps the case years ago more than it is now with us, and still is at the South in distinction from the sweet potato.

The only authority I know of in relation to the matter is Belknap's History of New-Hampshire, and as the book is not common, I will give, as briefly as possible, the substance of that historian, and if there is further or other information upon the matter, we shall all be glad to receive it.

In 1719 a large number of emigrants came to this country from the north of Ireland and settled a township which they called Londonderry. They were called Irish, and there was no little antipathy felt toward them, which would have been very foolish even if they had been natives of Ireland, but they were from a colony of Scotch presbyterians that had settled in the province of Ulster, Ireland, in the reign of King James I. They had a thirst for civil and religious liberty which their situation in Ulster did not satisfy, and nearly the whole colony removed to America. About one hundred and twenty families came. One hundred families came to Boston, and the rest landed on the coast of Maine. Of the former about sixteen families were those who made the settlement of the town of Londonderry. The historian referred to says: "These people brought with them the necessary material for the manufacture of linen; and their spinning-wheels, turned by the foot, were a novelty in the country. *They also introduced the culture of potatoes*, which were first planted in the garden of Nathaniel Walker of Andover. They were an industrious, frugal and *consequently* thriving people." Hence, these people being called Irish, the potatoes which they introduced were called *Irish potatoes*. A. B. B. *Randolph*, *Mass.*

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[For the Country Gentleman and Cultivator.]

GOODRICH'S SEEDLING POTATOES.

Eds. Co. Gent.—In the spring of 1861 I obtained a barrel of Mr. Goodrich's Seedling potatoes from him at Utica. The barrel contained half a bushel each of five different kinds, and I was so much pleased with their product that I wish to give a statement to the public through your columns.

The land was a rich loam, some gravel and clay, and had borne a crop of wheat the year previous. No manure used, but it was heavily manured for tobacco, which grew upon it two years previous.

I cut the potatoes, leaving two or three eyes in a piece, and planted in drills, dropping the pieces about 1½ feet apart in the row. Planted April 22d.

When dug they were perfectly sound, excepting a very few of one kind, the "Copper Mine," and they were so large and productive that I took pains to measure the ground, and with the following result:

Garnet Chili—14 bushels	—at the rate of	378	bushels	per acre.
New Kidneys—25 bushels	do.	400	do.	do.
Pinkeye Rusty Coat—17½ bu.	do.	475	do.	do.
Cuzco—20 bushels.	do.	560	do.	do.
Copper Mine—22 bushels,	do.	594	do,	do.

In planting, some varieties covered more ground than others, from having more eyes, or more small potatoes; hence the reason why the product of each half bushel varied so much.

I think Mr. Goodrich's Seedlings are a valuable acquisition, and I hope he will find the farming community ready to appreciate his efforts to grow a potato which is hardy, productive, and of good eating qualities, all of which are to a great extent combined in the sorts I raised last year. Samuel J. Wells. *Fayetteville*, *N. Y.*

P. S.—As I have no potatoes to sell, I would refer those who may want to Rev. Chauncey E. Goodrich, Utica, N. Y.

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Strange Disease.—The "Valley Star," published at Newville, Cumberland Co., Pa., of Feb. 20, says that a singular disease has appeared among the cattle of Wm. Smith, near Oakville, in that county. The disease commences on the side of the head and nose, causing the animal to rub, in some instances, until the skin is rubbed off, and the eye rubbed out. Some eight or ten hours after the disease appears the head commences to swell, and in two hours thereafter the animal is dead. It is supposed to be contagious.

Fig. 4.

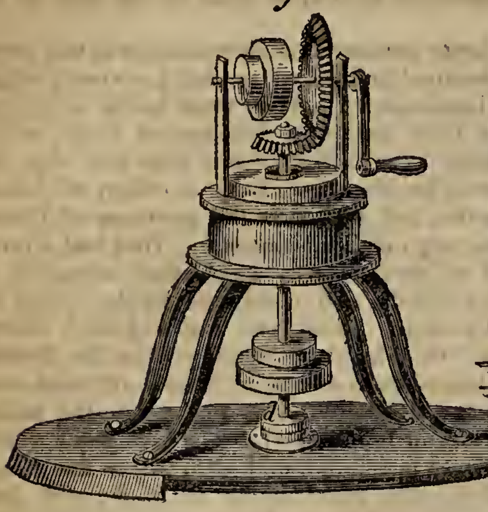


Fig. 3.

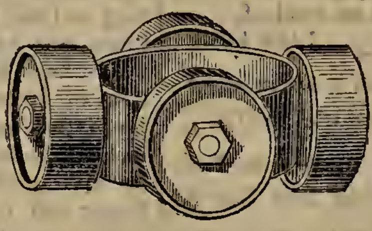
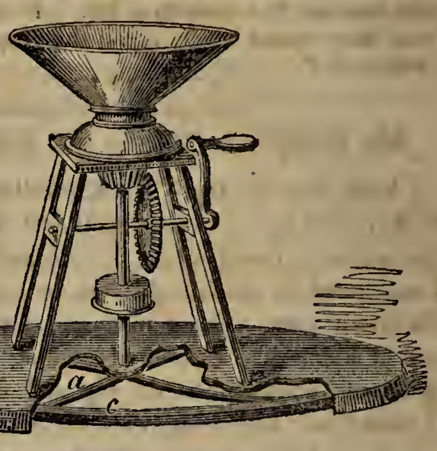


Fig. 1.



IMPROVED MODE OF HANGING FLYWHEELS.

The accompanying engravings illustrate an improved mode of hanging flywheels, which is quite novel, and possesses some important advantages over the plans in general use. The wheel is placed in the base plate of the machine on a vertical shaft, and the shaft may either run in a step in the usual way, or it may be supported by a collar running on friction rollers.

Fig. 1 of the engravings represents the wheel as applied to a grinding mill, with the shaft resting in a step in the cross bar, *a*, which crosses the base plate of the machine beneath the wheel. The base, *b*, is a large circular disk as shown, supported by a narrow rim, thus affording a space in which the flywheel, *c*, is placed.

The rollers are attached to a ring as represented on an enlarged scale in Fig. 3; the shaft passing through the axis of the ring, and the rollers running upon the upper surface of the base plate. In this case, the rollers and ring are inclosed in a tight box, *d*, as shown in Fig. 4; here the wheel is represented as applied to a rice and coffee huller.

Among the advantages of this mode of applying flywheels, are the following:—

1st. Wheels may be used of any desirable diameter, and as the efficiency of a flywheel depends as much upon its diameter as upon its weight, wheels of equal efficiency may be used much lighter than those of the usual form.

2d. The shaft running on a step, or on rollers, there is very little friction.

3d. The flywheel is entirely out of the way where it does not incommode the operator nor endanger his limbs.

4th. While a flywheel suspended in the usual manner upon the side of a mill, causes the mill to be top heavy, and in case of any wabbling in the wheel, resulting from inaccuracy in hanging, tends to shake the mill, this flywheel by being placed in the broad base gives remarkable steadiness to the machine.

5th. Another important advantage in the use of flywheels, as above shown, is, that the *size* and *weight* of the wheel may be *specifically* adapted to the capacity and requirements of the machine. And in running flywheels in this way, the *weight* of the wheel, which, heretofore has had to be sustained and carried on the upper and *working parts* of the machine, is sustained on the point of the upright shaft, relieving the working parts, and allowing the machine to derive the full benefit of the momentum of the wheel, without the friction hitherto engendered by the *weight* of the wheel.

This invention has been secured by J. Bryant, M. D., Brooklyn, N. Y. (See advertisement on another page.)

[For the Country Gentleman and Cultivator.]

THE MOST PROFITABLE SHEEP.

In my article on Sheep and Wool-Growing, &c., page 108, I promised to continue the subject of breeds, weights of carcass and fleece, &c., most desirable for profits, &c. Would be pleased to fulfil this promise at considerable length now, but time will not permit; still I cannot forbear touching upon the subject, by noticing an article or two on page 172, Co. Gent. of March 13.

1st. I. D. G. Nelson, in commenting upon your editorial article in a former number, falls in with the idea that is becoming much too prevalent—in my humble opinion—that "*mutton* sheep husbandry" *exclusively*, is the most desirable system. Surely the followers of this *one* idea system of mutton—without regard to fleece—(if you accept the term,) must be *generally* novices or gentlemen husbandmen, to accept its teachings and reject contrary *facts*. Old sheep-men *know* that a fine wooled carcass is easier kept than the larger open wooled coarser muttons, and more than this, the *heavier* the fleece the more easily kept in condition. Surely this is good philosophy. The fleece retains animal heat, and the animal requires *less* food to lay on flesh than if the body were more exposed.

2d. I reject the idea in toto, that any epicure can distinguish *varieties* (if you please) of mutton by the taste only. John Johnston, the observant husbandman, and whose opinion is entitled to as much weight on any questions of Stock or Agriculture as any other man on this Continent, because practical and experimental, gives a *trial test* at a dinner a this residence, of this very question. A fine cut of mutton graced the board. Gentlemen present pronounced it fine, and classed it of the South-Down or other mutton varieties, (my memory is at fault on the decision of the particular *stock.*) The host was appealed to, and took the conceit entirely out of his epicurean friends by the remark that it was *Merino.* But for the sake of the argument only, let us admit that the finer wooled sheep are *inferior* for mutton to the larger sorts. We are all after *profit* in all our stock and farm arrangements, and that the Merino will give *more* wool, commanding a *better* market, at a *less* expense of food than coarser sorts, is a recognized *fact.* After this, the carcass for mutton will *pay* as well—the less expense of production considered—as *any other variety.*

Again: It is *fine* wools, not *coarse*, that our manufacturers desire, to make up the millions of lbs. deficit of our home consumption. Coarse wools are easily obtained from abroad—not so with fine. We *should* and *can* grow all we demand.

Because many amateurs have imported coarse mutton varieties, and are breeding them to distribute for general adoption, is no valid reason why all sheep husbandmen of this Union must reject the tried profitable sorts of fine wooled sheep, for the larger, coarser mutton producers.

Spanish sheep—(I have none to sell, want to purchase) of a weight of carcass (ewes,) not to exceed 80 to 100 lbs., can be made to yield by judicious crossing, 5 to 8 and even 10 lbs. of wool each, besides raising a lamb yearly. This wool will command from 40 to 50, or 55 cents per lb. These sheep can be kept at about one-half the expense of the large sorts, and when desired to convert into mutton, will bring more than half—to say the least—of the other varieties. Besides this, the mutton is as equally desirable as that of any other kinds.

No, no, brother sheep husbandmen, let us not reject our Merinos, or other fine wooled, easily kept, neat carcassed flocks, for the mutton sorts too hastily. Should we do this, soon our markets will be overstocked with mutton, and the return in dollars for this mutton will be sent abroad to purchase fine wools, or the English manufactured production from that wool, to supply our clothing demands.

Let us view this matter rationally,—not with prejudice—looking to our best interests and the demands and needs of our manufacturers and the country. We must have something besides mutton, else the profits will be minus.

The length of this article is such already, as to preclude much greater continuation; still I cannot resist the temptation to notice (as sustaining my propositions previously advanced,) the article on same page from your valued contributor Mr. Geo. Geddes.

The table of weights of the Sweet Brothers' flocks, prove that it is *not* the larger carcass that gives the *greater* return of wool. I advance that it is the compactness of fibre on that carcass, that gives the yield and profit. A friend of mine has a flock of about 100 head, mostly ewes, that raise lambs weighing from 75 to 100 lbs. each, that have clipped 7¾ lbs. of clean, fine, well-washed wool, commanding from 50 to 55 cts. per lb. A buck, weighing some 140 lbs., sheared last clip 18 lbs. 2 oz. fine wool. The bodies of this flock are round, neat, and well wooled, no bare, exposed spots, but wool of an even firmness all over carcass. The *heaviest* clipping ewes of flock, are in the best condition, and consume the least feed to attain and retain that flesh.

Now shepherds and sheep-growers, for wool or mutton, let us make a note of the idea advanced by Mr. Geddes,—let us attain results in the manner of the Messrs. Sweets,—making comparisons and thus arrive at *facts*—aye *these* are what we want; no fine spun theories, but correct, demonstrable truths. The attainment of these will allow us to act understandingly, and from them, and the observation and experience of others, may we decide which are the most profitable, fine or coarse wools—large or small sheep. If this be done, I have no fears of South-Downs or any other large varieties, superceding our hardy, profitable Merinos. "W."

London. Madison Co., O.

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[For the Country Gentleman and Cultivator.]

A GOOD STOCK BARN.

Messrs. Editors—In reading that excellent letter of John Shattcuk's, in Co. Gent. March 6th, page 156, I notice he wants a barn so arranged that he can have access to any mow of hay when he wishes. I have a barn for stock with six mows for hay, so that each mow can be got at any time. It is 30 by 40, with floor in centre; then 50 by 28, with 12 feet floor on one side. Two mows in the 30 by 40—one each side the floor, and four mows in the 50 by 28—a division between each bent. Hay goes down between the floor and mows. My barn is an overshot—three stories—28 feet posts, and every thing suits me about it except the manner of saving manure.

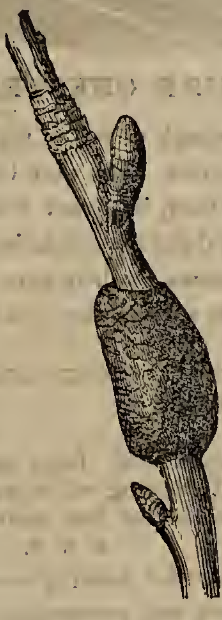
My stabling is in the part of barn 30 by 40—use stanchions and platform with gutter for droppings; yet I think a cistern 3 feet deep with a slat floor over it, would save the urine better, and by having the slats easily taken out the whole might be loaded on a sled and drawn where wanted about once a month, thus saving one or two handlings. Edmund Rose. *Delhi, March 15th.*

[For the Country Gentleman and Cultivator.]

THE EGGS OF THE LACKEY MOTH.

There is not an insect more universally known in our country, than the American Lackey Moth, or as more commonly known by the name of the Apple-tree Caterpillar. Its cobweb-like nests may everywhere be seen during next month, and the fore part of June, upon apple and cherry trees. These insects are much more numerous some years than they are in others; for instance, in the years 1846, '49, '56, and '58, they did great harm to apple-trees; and I think they will prove to be more abundant during the present year than they ever have been known to be at least in this vicinity, although I hope to be deceived in this respect, but circumstances cannot possibly permit such a lucky disappointment.

The past week I have destroyed millions of the eggs from which these caterpillars hatch, often finding from three to four nests within four or five inches of each other.



The best time to destroy them, is before they hatch and do mischief. The eggs may be easily discovered before the leaves start, by a careful observer. They are generally placed on the twigs near the commencement of the last year's growth, in clusters, forming cylinders or rings, generally surrounding two-thirds, and sometimes the whole branch, as shown in the annexed cut.

The rings often contain about three hundred eggs. They are generally three-fourths of an inch in length, and the tenth of an inch in thickness.

As I am afraid of occupying too much space in your columns, I must be brief upon this subject, by saying that I consider the best way to remove the eggs, is to place them between the thumb and fore-finger, and wring them from the branch, being careful not to leave any part of the nest sticking fast to the bark, as they sometimes break apart very easily.

I request of those living in various parts of the country, having orchards, to make examinations, and state the result of their success through the Country Gentleman.

Washington Hollow, Dutchess Co. C. R. C. MASTEN.

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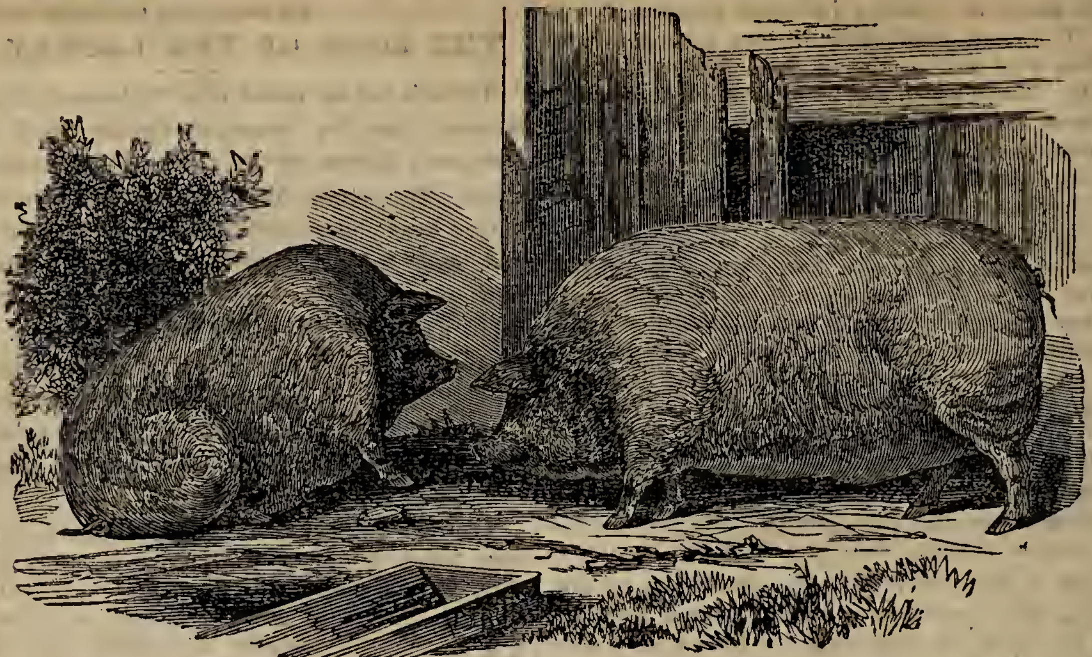
[For the Country Gentleman and Cultivator.]

MANAGEMENT OF POULTRY.

Messrs. Editors—In Co. Gent., page 208, E. M. wishes a remedy for a disease which has broken out among his poultry. I think he is killing them with kindness. The disease is a distemper which breaks out among poultry where too many are kept together. There shouldn't be more than a dozen kept together in one apartment. I remember a few years ago my father had a small coop and over stocked it, and this distemper broke out among them, and carried off a great many. I don't remember how it was stopped. There was a doctor in the city who overstocked his yard, and this distemper broke out among them. He tried almost everything, including Cayenne and black pepper, which sometimes cures, but it did'nt do any good. As a last resort he mixed up the meal in clear castor oil. He said he would either kill or cure. It physicked and cured them, and he lost no more. I think E. M. had better turn them out of his poultry-house and let them shift for themselves, and roost on the trees and have the fresh air. A neighbor near here keeps from 30 to 40, and has no poultry-house. They roost on the trees in the orchard all the time. They look bright and healthy, but do not lay much in cold weather. I do not state this method because I am in favor of it, for I am not; but to show that poultry need pure air. I am in favor of warm houses, but a remedy for a disease must be different from the manner in which they have been kept. D. Davis. *Fall River, Mass.*



PURE CHESTER COUNTY PIGS

The above engraving, from a photograph of two of my pure stock of Chester County pigs, gives a fair representation of the prominent points of the breed. The pure Chester pigs are believed to have originated at least thirty years ago, by crossing a Bedfordshire boar, imported into Chester county, with the best stock of that county. By careful selections and breeding their valuable characteristics have become established, so that they may now be considered a distinct breed. They are known by their pure white color, great length and depth of carcass, small head and offal parts, capacity for growing to a large size, quiet habits, and easy feeding and fattening.

Philadelphia, Pa. PASCHALL MORRIS.

DRAWING WATER.

Will you, or some of your correspondents, favor us with a description of the best mode of drawing water, so as to have it fresh and good, with none of the bad taste of a pump? G. R. N.

Many contrivances have been devised for drawing water. The tubular pumps are compact and convenient, but do not furnish so fresh and pure water as the chain pump, which stirs the contents of the well every time it is used, but which in turn has some serious defects. The "old oaken bucket" is still preferred by many.

Inventors have tried their skill to remedy the inconveniences of the bucket striking the stones at the sides, in its passage up and down, and of requiring the use of the hands every time in emptying. But as the complexity of the machinery is increased by such contrivances, so is their liability to get out of order. There is one, however, that is comparatively simple, at the same time that it is quite efficient. The following is a description :

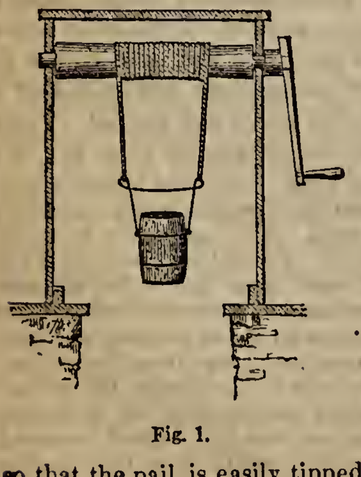


Fig. 1.

A curb is made, and a cylinder about six inches in diameter, turned by a winch, is placed horizontally across it. A cord, whose length is twice as great as the depth of the well, winds upon this cylinder, from the middle towards the ends, as represented in the cut, (fig. 1.) The bail is fastened about one-third or two-fifths down from the top, so that the pail is easily tipped in emptying. The form of the bail, and the places where the cord is attached to it, is also indicated by the figure. Being thus attached, these cords stiffen the pail in its position, so that it will swing but little, and they keep it to its place while emptying. A hook, projecting over the spout, catches the pail, (fig. 2,) and one turn of the winch inverts it, and discharges its contents. The spout should not be fastened in its place till a few trials determine precisely where it should be.

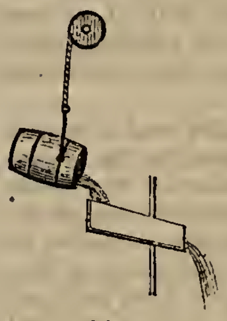


Fig. 2.

There are two ways of filling the pail. One is to have a valve in the bottom, covering a three-inch hole; and the other is to have a heavy hoop at the top of the pail, so as to tip the mouth in the water. The valve is easily made by nailing on one side a piece of leather considerably larger than the hole, and a piece of board to the top of the leather over the hole, the leather thus forming the hinge. Good cord, half an inch in diameter, will be quite large enough, being thus double; and if the well is 30 feet deep, it would wind so as to spread to 20 inches wide. Very deep wells might have larger cylinders, or cord one-third of an inch diameter, or both. The cylinder should be evenly turned, in a lathe. The bail is made by giving the rod of iron which forms it one turn at each corner, and the two eyes thus formed should be nearly as remote from each other as the breadth of the coil of cord on the cylinder, when the pail is at the top of the well.

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Tanning Sheep Skins with Wool on, for Saddle Covers, &c.

An exchange says, sprinkle over the flesh side of the skin a powdered mixture of one part alum and two saltpetre, and fold this side together, and hang in a cool place. The process is completed in two or three days, or as soon as dry, by taking it down and scraping the flesh with a blunt edged knife till clean.

A DAY AT GENEVA.

A passing visit at Geneva, on the 10th, gave us a pleasant glimpse of the improvements which E. Sherrill, Esq., has been carrying out upon the farm purchased by him just on the northern limits of the village, about two years ago. It possesses many natural advantages, but had suffered badly from neglect. Mr. S. has remodeled the buildings or put up new ones, re-fenced and drained the fields, and entered upon a system of culture which bids fair to become remunerative as well as permanently productive. Although warned by some against *deep plowing* for the corn crop, he determined that that should form no exception to the newly established rule, and the experiment last season proved remarkably successful. The feeding of stock enough to provide the necessary manure, is to form the basis—with deep plowing, thorough draining and an appropriate rotation, as co-operating supports—of all his undertakings, and we shall watch and hereafter report upon their progress with much interest. The farm buildings are simple and very convenient; and a thriving lot of cattle, which have been wintered largely upon cut cornstalks, now await a summer's pasturage to close up their account with the farm. Mr. S. proposes to keep hereafter quite a flock of sheep, and has decided upon the fine wooled as promising him the best returns.

With Mr. Sherrill and Col. Johnson we also spent an hour at "White Springs Farm," where James O. Sheldon, Esq., has built up a Short-Horn herd, now including we believe between fifty and sixty head, and a flock of some of the best South-Downs "on this side the water." Situated almost in the heart of one of the finest and wealthiest farming districts of the State, this herd should be matter of pride throughout all Western New-York, and its ready accessibility and great attractions ought to make it the goal of many and frequent visitors. It affords us pleasure to know that such is beginning to be the case, and that Mr. S. has recently made a number of sales which would have been thought creditable to the interests of the breed, in brighter times than these. We obtained permission to publish the particulars, but they are not yet at hand, at the present writing.

When the season is sufficiently advanced to see more of the farmers and farming of Seneca and Ontario, we hope to call upon a larger number of our friends among the thorough-going farmers of these well cultivated counties. The spring at present is rather backward, and the freezing and thawing of night and sunshine alternately, may have done some injury to the young wheats. But it is hoped that no serious damage has yet been inflicted, and that the coming harvest will bring in a crop of at least the usual extent.

In the afternoon of the 10th, we called at the extensive breeding stables of Joseph Wright, Esq., near the village of Waterloo, and upon Judge Sacket at Seneca Falls, whose yards contain some very pretty specimens of fattening steers, including one exhibited at Watertown last autumn, which last is still making fine progress, and promises to attain an unusual weight.

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☞ The Annual Exhibition of the Rensselaer County Agricultural and Manufacturers' Society, will be held on their grounds at the city of Troy, on the 17th, 18th and 19th days of September next. The President, Hon. L. Chandler Ball, has issued a circular note to the farmers, manufacturers and mechanics of the county, calling their attention to the great importance to themselves and the country," of putting forth their best efforts to increase the amount of their several productions, and of placing the best specimens of each on exhibition, where their excellence may be made known, and purchasers secured." We infer from a private letter received from Mr. Ball, that Gov. Holbrook of Vermont is expected to deliver the Annual Address on the 19th.

The Farm should not be Overstocked.

In writing and speaking of the lessons of English Agriculture, we have always placed in the foremost rank, the fact so clearly shown throughout its whole history, that the live stock of the farm has there increased with the increase of its cereal crops—or rather, that one reason why English farmers produce more grain than we do, and upon a far smaller surface, is because they keep *more stock* and devote a far larger surface to the growth of crops exclusively for their stock.

If, however, this is interpreted to mean that our farmers ought to keep more sheep and cattle on their farms *whether they grow hay and roots enough to feed them on or not*, it is very bad advice. The *first* lesson which the good farming of England or any other country, invariably teaches, is that whatever is undertaken pays best in the long run, when it is done thoroughly and well. We can obtain more and better manure for our crops, from a few animals well fed and attended to, than from a larger number that are just kept alive, and mainly left to take care of themselves. If we can save a year in the fattening of a sheep, or pig, or bullock, by more food and better care, we are saving ourselves twelve months' keep, are turning over our money twelve months sooner, and can consequently derive a greater profit by every step which tends to lessen the time of feeding, even if in order to do so, we considerably diminish the number we feed.

The excellent article on raising Lambs for butchers, in another column, from the pen of Mr. Taylor of New-Jersey, affords a striking instance in point. He shows from his own experience that he began by attempting too much; that he kept *reducing* his number of sheep and *adding to the profits* they yielded him, for several years in succession, and without any exception to the advantages that resulted. "Cut short your losses, but let your profits run on," is an old business rule very applicable on the farm. Animals which are kept so as not to be gaining from day to day, and from week to week, fairly come under the head of losses that are "to be cut short;" in other words, where there are so many of them as to be barely kept alive on the produce of the farm, it is entirely consumed in merely supporting them, and they are no better off at the end of the season than at the beginning; while with a reduced number, a proportionately smaller amount of food would support life, and all the rest would be converted into additional flesh, in which there would be room for a profit "to run on." Mr. Taylor, in a private note justly adds, that "instead of having the country overrun with great numbers of animals stunted and starved, a smaller number kept as they should be, would result in far greater pleasure, credit and profit."

It is for this reason that we have never united in the outcry which one or two noisy advocates of keeping stock "in just a thriving condition," always raise whenever they see a Short-Horn whose ribs they can't count at the first glance. Over-feeding, especially of prize animals, has unquestionably become a great evil in England—it may eventually be an evil here. But the danger is as yet distant. We do not preach against the sins of people in other countries, as some ministers have a way of doing; but prefer to call the attention of our hearers, if possible, to the error of their own ways. And, aside from the merits of one breed or another, as exhibited at our Agricultural shows, we regard it as their especial mission to present, so glaringly that the wayfaring man though not very bright cannot fail to observe it,—a lesson in the good keeping and care expended upon all breeds and classes of our domestic animals,—a lesson which the farmer, going home, will act upon, emulating what he has seen, until the "comparative anatomy" of his cattle or sheep, shall become to him a much more difficult study than it now is from the living example.

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A man with a long head is not very apt to be headlong.

LETTER FROM HON. A. B. DICKINSON.

Suggestions about the Treatment of Different Soils.

Leon, Central America, March 1, 1862.

Messrs. Tucker & Son—Your valuable paper of 19th December has been received, and was truly a welcome visitor, as it was the first I had received since my arrival in a country where such a thing as an agricultural paper is unknown.

It is a singular fact that while more than one half of the whole male population of the globe are engaged in agricultural pursuits, I have never yet seen an agricultural journal for sale on steamboats, cars or other lines of travel, or at any place except at the offices where they are printed; and yet all of the above places (especially in our own country) are flooded with political, religious, miscellaneous, and other papers of almost every description. Why should this be so while every body admits their utility, and while it is an admitted fact that all men —particularly the politicians of all ages and of all countries, have been the friends and advocates of the farmers? Indeed one might be led to suppose that their peculiar champion—the politician—understood the business of agriculture much better than the farmers themselves. They are always ready to give them good advice.

Why is it that agricultural journals, above all others, are not to be found in the market places? It is simply, *because no one calls for them.* I have asked the newsboys a thousand times for an agricultural paper, and the answer has always been—"I do not keep them, for no one, or none but yourself, ever asks for them." Let ten or twenty men call for them every day, and they will be on hand as plenty as goose-yokes would be in a country store if all the customers demanded them.

I also received Mr. Luther H. Tucker's Oswego County Address, for which I am much obliged. And while acknowledging the receipt of those, allow me to answer a few of the erroneous teachings of one of your old correspondents, to be found on page 397 of the current volume of the Country Gentleman.

Mr. Levi Bartlett, in speaking of Mr. Thomas' recommendation to Cayuga County farmers, "to spread their manure for spring planting in the fall," says:

> "I believe Mr. Thomas is correct in his advice to Cayuga County farmers, and whatever course in this method of applying manure is profitable to the farmers of that county, will also be found equally so to the farmers of other Counties and States."

Strange teaching this to new beginners who are looking for correct information as to the most economical mode of using the great renovator of soils, to say that because the fall application is best in Cayuga County, where the surface soil is highly charged with lime and clay, resting on a tenacious subsoil within twelve or eighteen inches of the surface, which holds all the leachings as safely as would a stone crock, it will also be found equally so to the farmers of other Counties and States.

On all soils where manure does not waste, the earlier it is spread on the surface and incorporated into the soil, the more benefit is derived from it. Where the field is level, and contains an impervious subsoil, there can be no waste, if no more is applied than the soil requires. It is much better and safer to apply on sod than on plowed ground. Such tenacious soils, when once made rich, by good husbandry never grow any poorer. The benefit of fall manuring in Cayuga, holds equally good in the most of Seneca and Yates counties, and in considerable portions of Ontario, Livingston, Genesee, Niagara, Orleans and Erie. While most of the land in Cayuga would be benefitted by this system, I am not by any means certain that all the land in that county should be treated to a fall dressing; for if I remember correctly, when traveling there some forty years since, the timber on portions of the Owasco flats, and the old Indian fields on Salmon creek, as well as some other localities, give unmistakable evidence of a deep, porous soil, which no observing, practical and experienced farmer would think of manuring in the fall for spring crops. I am satisfied that deep, coarse, porous soils, will in no country retain manure more than three or four years. Indeed, the manure is of but little benefit on such soils after the second year, and is principally exhausted the first. Therefore on all soils of this character, the manure should be put on with the growing crop, as the loss would generally be one-fourth, and in some instances one half, by applying it the fall before. There are thousands of acres of land which have been exhausted by cultivation, and thrown out to the commons; and as cities and villages grow up in their neighborhood, and produce is increased in value, they have been reclaimed by lime and manure, and have yielded excellent crops for a year or two. But it has soon been found that, not having a bottom to retain it in the surface soil, through which it leached with about as much facility as through a sieve, they were a source of more expense than profit, and so they have again been abandoned to their natural products—five finger and poverty-grass. And this too between the two great commercial emporiums of the United States, New York and Philadelphia.

Much of the land on Long Island, which is so valuable near the city, would not be worth a straw in Cayuga county for farming purposes; and yet, where it is, they can afford to purchase manure and leached ashes by the bushel, and carry them on their shoulders to spread both fall and spring; and they can make more money by gardening in this manner than the farmers of Seneca, Yates and Livingston counties do on their naturally fertile and enduring soils.

And what do these facts teach? Simply this: know well your soil wherever it is; cease quarreling with the Almighty, and use the land for the purposes for which He made it. You will then cease to reverence the teachings of Liebig, or follow in the wake of Way, and fall back on your own resources, and try to master the unerring truths of Nature.

Mr. Bartlett tells us there is a great saving by drawing and spreading in the fall, as the expense of piling in large heaps and reloading in the spring is no trifling job. Nothing truer. But wherefore the necessity of drawing in the fall, and reloading in the spring? Does manure, like wine, improve by long keeping? Are the farmers of the country so rich, or their farms so profitable that they can afford to lay out of their interest for a year, as they must do if they hold their manure over till fall for next spring's use? Take your manure the same spring after it is made, and draw it out on any land where it should be drawn in spring, or can be without injury to the soil, and I will engage that it will pay more than ten per cent the first year, at any reasonable value you choose to put upon it. Do you not believe that eight loads to the acre, well spread on a thin meadow, would increase the quantity of hay from one-fourth to one-half of a ton per acre? And it will do still more good if spread on a newly sowed crop seeded with grass. If the land is thin, the crop of oats or any other spring crop, will be increased from 10 to 25 per cent.; and besides, the grass-seed will be sure to take, and the hay will be increased at least as much more the next season.

The many unerring proofs which exhibit themselves to the observing, thoughtful, practical farmer in the various kinds of soil, show the proper time for applying manures in different countries, and not unfrequently that a different mode of treatment is required on the same farm, the reasons for which are quite too numerous to explain in such a paper. Let one or two suffice on this occasion, that new beginners may not mistake.

On all tenacious soils, no matter what their composition may be, never apply manure when the ground is wet. Nothing can be more injurious to such soils than driving over and trampling them down while in such a condition. It crushes the life out of the soil, and packs it solid, so that it bakes and chunks up when plowed; and therefore it is sometimes necessary to manure such soils in the fall, especially where the spring season is so short and wet that there is not sufficient time to draw out and spread the manure in time for planting.

On the other hand, some of the coarse, gravelly or shale soils, or even the barren sands of Cape Cod, of which Mr. B. speaks, are improved by driving over and trampling them when wet. I have but little doubt that those barren sands could be made productive by herding cattle on them a sufficient length of time in wet weather. The principal question to determine in that case would be, whether it would not cost more than it would come to. Much of the prairie land of the West, which he thinks would have been as barren as those of Cape Cod, if Liebig's theory was not correct (which I will endeavor to show the fallacy of in another communication,) is improved by herding cattle on it, as the traveller, if an observing one, will discover by seeing here and there a most beautiful green spot covered thickly over with luxuriant white clover and blue-grass, which are not to be found anywhere else on the prairie. If he will take the trouble to inquire, he will find that some herdsman has in by-gone times yarded his cattle there; and if a practical farmer he will soon take the hint that its fertility is not altogether chargeable to the manure which has been left there, but partly to trampling down of the light soil, which has given it greater compactness and tenacity than the surrounding soil, and which in fact has changed its character, and made it congenial to other plants.

On the other hand, the same treatment on a stiff tenacious soil, would drive out the very same plants, and bring in a different kind, the worthless May-weed for instance, that is seen growing on the road-side.

Again, take two pieces on the same farm, and on the same stiff adhesive soil as near as can be—sow a crop of field turnips, or almost any other crop on one of them on the same day in the morning when dry, and put on a flock of sheep large enough to trample it thoroughly, and it will improve the crop. Treat the other piece in precisely the same manner until the crop is in; then let a shower of rain come on it sufficient to saturate the soil, and then turn the sheep on and trample it down in the same way, and the crop is spoiled. On the other hand, if the soil should be very light and porous, the latter piece would be improved. Therefore the casual observer, by studying the simplest laws of nature, can determine where it is best to apply manure in the fall, and where in the spring, with the same certainty that he can tell which he should set under his water-spout, his basket or his barrel.

A. B. DICKINSON.

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[For the Country Gentleman and Cultivator.]

CHANGE OF SEED.

I see the subject of changing seed has been discussed in the Farmers' Clubs this winter, and it is not my intention to say that a judicious change of seed is not sometimes necessary, but merely to state a few facts in regard to my own experience. I have cultivated the white Meshanoe potato for thirty-four years on the same farm, without any visible deterioration either in quantity or quality. Our early patch in the garden has been raised on the same plot of ground without changing for thirty years, and never has failed to produce a good crop in all that time. The ground was rich when I commenced, and has been manured every spring since with stable manure.

I have one kind of corn that we have raised for thirty successive years, and I would not exchange it for any other corn that I know of; but I would state that it requires the greatest care to prevent corn from deteriorating. It must be planted apart from other varieties; and more than that, you must select your seed from corn that has been raised on rich land, for it is just like cattle; it will degenerate if not well fed. We have not confined ourselves to the one kind of potatoes and corn. We have tried various kinds, but consider it more trouble than profit to keep them distinct, although we are not of that number that believe that potatoes will hybridize by using the tubers for seed; still it is difficult to keep a number of kinds apart, which always ought to be done.

I have quite a different experience to relate in regard to our cultivation of wheat. I have had to change seed every few years. We have found what we call the finer kinds of white wheat, more apt to degenerate. By sowing three or four years, it will scarcely pass as white. We have to get a new start from the north. I think we are too far south to raise wheat to perfection—latitude, 38 north. Although the State of Kentucky is famed for producing fine crops of white wheat, I think it must be owing to the soil more than the climate, and should like to hear from some of the farmers there how they manage to keep it of a fair color. S. J. *Gallipolis, O.*

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[For the Country Gentleman and Cultivator.]

THE COST OF RAISING CORN.

We had always been surprised that western farmers could raise corn at a profit at prices varying at from 15 to 30 cents per bushel; but the past year we kept an accurate account of the cost of our corn crop, and can easily believe that on the fertile and easily cultivated lands of the west, where horse power can be used instead of the hoe, corn can be profitably raised at the above prices.

Our cornfield consisted of three acres. It had been mowed for three years previous—was strong, and required two yoke of oxen and two men to break it.

To 4 day's work plowing,	$10.00
3 day's drawing manure with two men and team,	6.75
Spreading manure,	75
Harrowing,	3.00
Chaining both ways,	50
Three day's planting,	2.25
Three pecks seed corn,	75
Interest on land at $30,	6.30
Three hundred pounds of plaster,	90
Plastering,	62
Cultivating both ways three times,	3.75
Twelve day's work hoeing three times,	9.00
Four day's work cutting,	3.00
Husking and drawing in corn and fodder,	10.00
Sixty loads manure at half price on account of future benefit,	7.50
Total cost,	$65.07
Corn fodder,	15.00
	$50.07

Three hundred and seventy bushels of ears at a cost of 27 cents per bushel shelled corn—showing that corn can be profitably produced even in this *stony* country.

St. Lawrence Co., N. Y. ST. LAWRENCE.

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[For the Country Gentleman and Cultivator.]

MATCHING WORKING CATTLE.

Messrs. Editors—Observation has led me to the conclusion that in matching working cattle the following are requisites, viz.: They should be of one age, of equal size, of the same color, space between the eyes of equal width, length of hair, and also quality of hair as to coarse or fineness, size of bone, thickness of skin, &c., &c., all of which should be as nearly as possible the same. Then, if well broke, my word for it, you will have a good pair of cattle.

For the consideration of those who may doubt the above statements, we will call their attention to the following facts: Why is one animal white, another black, this one red, that one spotted, one long-haired, another short-haired, &c.? Why this difference? Men may not agree as to the cause of cattle varying so much in their appearance; but nevertheless the cause is a true one. And as a general rule when causes are alike, their effects will be alike. Why are twin calves more likely to make an even pair of cattle than calves that are of no kin to each other? They are more likely to be fashioned alike in every respect. Hence their evenness. Like causes like effects. Two animals of no more kin to each other than men of the present day are to Adam, if fashioned alike in every respect, will be as near alike in their dispositions as a pair of twins, and in one sense of the word would be twins. The same rule will apply to horses and other animals, mankind not excepted. G. P. Serviss.

[For the Country Gentleman and Cultivator.]

How to Improve a Badly Run Farm.

Messrs. Editors—Having in a former article advised those with limited means, to buy farms that were more or less run down, and stated that they would have to adopt some course of improvement, by which the land may be brought up and made productive, I will now proceed to point out the course that it will be best for them to pursue.

The first and most important point to be considered and attended too, is a general change of crops. Most farms that are run down, have been under a long course of cropping with one or more of the different small grains, such as wheat, rye, barley or oats—one of these grains generally being made a leading crop; in wheat sections, it is wheat, in other sections oats. And although rye and barley are raised to some extent, yet a large portion of badly run land has been mainly cropped with wheat or oats; while these crops are calculated to have as bad effect on land, and to give it a poor worn-out appearance as quick as perhaps any other crops; though in reality it may not be so very badly run down for other crops, besides wheat and oats. Again, such land is generally not plowed more than four or five inches deep, consequently, though the land may sooner appear to be worn out, yet in reality it is only badly run to that depth. Hence a change of crops, and deep and thorough cultivation, may be expected to produce excellent results.

This may be illustrated by relating a little of my own experience. (And here let me say, I do not intend to state or recommend anything in these remarks, that I do not consider warranted by my own experience or observation.) I commenced farming on a small place that had been let to neighboring farmers,—no one residing on the place for many years, before it came into my hands. As is often the case, all that was raised was taken off from, and nothing returned to the land. It had not been seeded down for a long time until the spring before I bought it, it was seeded to clover. Wheat had been the principal crop, alternating occasionally with oats—the last crop, which was oats, only yielding some twelve or thirteen bushels per acre. It was so badly run out, that it was difficult to get any one to take it. The spring it came into my possession, I planted six acres to corn and potatoes, the corn yielding at the rate of fifty bushels of shelled corn to the acre, and the potatoes at the rate of 160 bushels per acre. These crops were raised without any manure, except the clover sod of the previous spring's seeding, and were undoubtedly due to a change of crops, deep plowing, and good cultivation. Nor was this all; by making a general change of crops and management, the land was not only made productive and profitable, but the general appearance and credit of the place was brought up and improved so much, that when I wished to sell and buy a larger farm, it sold for about double what it cost me. I have also pursued a similar course or change of crops on my present farm,—which was considerably run down—with very satisfactory results.

There are many similar instances of the great benefit of a change of crops, that have come under my notice, but I can make room for only one or two. One is in regard to a piece of rather poor hemlock land, that, as it was not considered very good wheat land, had been kept in spring crops some years, and as the owner said, "wanted seeding down." He said he "did not expect much wheat, as it was not wheat land, and had been a going in spring crops some time and wanted rest; but that in order to get it in a good condition for meadow, and well seeded, he was going to summer fallow and sow it to wheat." Yet that field gave 30 bushels per acre, which was an extra crop for that kind of land. In another instance, the same kind of land that had been badly run to spring crops, was sown to wheat on oat stubble, and gave over 20 bushels per acre.

Having shown that a change of crops produces good results, we would continue to make use of this fact, as far as circumstances will admit, by adopting a systematic change or rotation of crops. There are many good and sufficient reasons besides those already given, in favor of a rotation; but the readers of the Co. Gent. being familiar with them, I shall proceed to consider what crops should be included in a rotation for a badly run out farm.

Perhaps the best way to determine this question, will be to consider what crops have been grown to impoverish the land. But this has already been done to some extent, in considering the necessity of a change of crops. Hence, having seen that the small grains have been the principal crops raised in running down the land, it will be best to raise as little as possible of them, and find some other crops to take their place.

Now there is one crop that I have seldom, if ever, heard charged with wearing out, or even injuring land. True, we sometimes hear of land becoming "clover sick" in England. But I believe such cases are exceedingly rare, if there are any at all, in this country, and more especially when plaster is sown on the clover, as it always should be on all but very rich lands. But on the contrary, while clover never impoverishes land, it is seldom raised without improving the soil and putting it in a much better state for other crops; and this improvement being much greater and more surprising on badly run land that has been but seldom, if ever, clovered. Again, clover can be made a very profitable crop, as I hope to show when writing more in detail in regard to its cultivation. Now for these reasons, and many more, some of which may be given another time, clover should be the leading crop in bringing up land.

Next to clover I consider corn the best crop to grow in improving the soil. The reason for this opinion can be easily made apparent to all, in this way. Who ever heard of land being run down where clover and corn were the principal crops; and these crops, made good by thorough and deep cultivation and manuring, were mostly consumed on the farm, as, of course, they should be? Such cases must be exceedingly rare, if indeed there are any. For my part, I have yet to meet with the first one. True, run down land will not continue to produce as good crops for any considerable length of time after a change as it does at first. Yet by raising clover and corn for the principal crops, and feeding a large portion of both on the farm, the land may be constantly improving, and the crops after the first and principal effect of a change is worn off, be continually growing better. It is true that corn grown year after year on the same field for a long time will on most soils run down the land. But when it is grown only once in four or five years, in a judicious rotation, and everything in relation to the crop well managed, the general effect and result will be altogether different.

But, though corn and clover should be the principal crops, yet there should be some kind of grain sown after corn to seed down with. What this should be may perhaps be best determined in each particular section, regard being had not only to what would be likely to succeed best, but also to the kind of grain that clover will take the best with, it being always important to get a good seeding.

In considering the best way to improve a badly run farm, I have not alluded to underdraining, for the reason that a man commencing on such a farm, more or less in debt, will have but little means or inclination to do anything of the kind, but will rather choose to buy a farm that may be improved without it. Still there may be instances where it will best to buy land that needs underdraining. In such cases due allowance should be made for it in purchasing, and sufficient money retained to pay at least some portion of the expense.

As good and deep cultivation and manuring, which should include a liberal use of plaster and ashes, have been frequently alluded to, it will not be necessary in concluding, to do more than merely state that while they are very important on all farms, no one need ever think to succeed for any length of time on badly worn land without giving both the strictest attention. And that, as a general change in the course of cropping and manner of cultivation will give good crops on the start; so these crops should be so managed and used as to give the largest amount of manure that it may be practical to make, thus making good crops add largely to the amount of manure, which in turn will add to the amount of crops, and this course followed up, will be sure, sooner or later, to make a good productive farm. F. *Orleans Co., N. Y.*

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[For the Country Gentleman and Cultivator.]

HOW TO DESTROY RED ANTS.

Messrs Editors—J. H. F. inquires how to destroy "those ants." I conclude from his description of them, they are what are called the red ant. I would say to him, and to all others who are troubled with those little torments, that thousands of them can be destroyed a day by putting walnut meats on pieces of paper and placing them in their trails. When a goodly number have gathered on the meats (of which they are very fond,) carry them on the paper and burn them. This can be repeated several times a day. My house was literally over-run with these little pests a few years since, but by perseverence, my wife destroyed them so effectually, that we have not seen one of the little intruders for the last two years. L. *South Hadley.*

We have no doubt but that the method above recommended will prove entirely successful; but if our correspondent cannot procure walnut meats, a piece of fresh meat, or any thing which will draw the ants to it, will answer the same purpose. The only requisite is that the remedy be continued so long as any of the ants appear. The bait should be placed where the ants are most numerous, and it will hasten their destruction by placing it in different apartments where they congregate largely.

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HOW TO MAKE STRAW HIVES.

In the Country Gentleman of Jan. 16, p. 50, we published an article from a correspondent of the Dollar Newspaper on the advantages of straw hives. The writer, in conclusion, promised to furnish a fow plain directions for making straw hives, which he had seen in use the past year. These directions are as follows:

I do not claim that my plan for a straw hive adapted to improved bee-keeping, is the best that can be devised. I do not say that it is the best that has been given to the public, but since it is cheap, simple, and free from the suspicious prefix of *patent*, [Would it not be claimed under the Langstroth patent on account of the movable frames?] it is the more confidently submitted for what it is worth.

Take strips of pine or other soft wood, an inch thick by two inches wide, and make two rectangular frames, halving the corners together and keeping the wider surfaces in the same plane. These frames must be of the same size, and of dimensions according to the size of the hive required. Lay one of them on the bench before you and nail to it upright strips of lath of length corresponding to the height of the hive, the lower ends being even with the lower surface of the frame as it lies. These uprights must be nailed on both inside and outside, and about four inches apart. Now take long clean straw, previously wet, and lay it between the upright pieces of lath, bending it round the corners in such a way as to make the walls of the hive. Having pressed the space full, lay the second frame upon the straw directly over the first, nail the upper ends of the lath to it, and the hive, with the exception of the top, is done. Such a hive should have two tops, movable, of course, as in all movable-comb hives; one of wood an inch thick, to be used during the gathering of surplus honey, and the other of straw for spring, fall, and winter. This straw top may be made on the same principle as the hive. Make a frame of proper size, and two inches deep; nail pieces of lath on the under side, sinking them in so as to leave a level surface; fill in above them with straw and bind it down with lath nailed above, crosswise, from side to side. It will be unnecessary to leave any passages for ventilation, and as the thin wood top is to be used in the honey season, no holes are necessary in the straw top to communicate between the boxes and the hive. Such hives, with no ventilation but that afforded by the porous absorptive mass of straw on the sides and the top, were found free from frost on the combs and in fine condition where the thermometer stood at 10 degrees below zero, Fahrenheit.

It will be seen at once that this hive is adapted to the movable combs, the fixtures of glass boxes and wooden covers, and all the appliances of improved bee-keeping, quite as well as those made of wood.

It may be objected that the bees will very soon coat the inner surface of such a hive with an impervious coating of propolis, thus preventing the absorption of moisture. Granting both this to be true and that it could not be easily remedied, the advantage of an even temperature would remain. But if the inside of the hive should chance to be coated as thoroughly as supposed, the frames being movable could easily be taken out and the propolis taken off the straw by scraping, scratching or scalding with hot water. And even if this could not be done, since winter is the time when the hive should be most nearly closed to retain the animal heat, the straw top would then be used, which would, probably, of itself, afford sufficient ventilation.

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[For the Country Gentleman and Cultivator.]

THE HONEY BEE.

Inexperienced bee-keepers will be interested to know that many swarms are destroyed, and many others greatly injured, by neglecting timely to remove from the bottom board of the hive, the cappings of their winter stores and young brood, and the bees which die in winter—which, together with the moisture from the condensed vapor in the hive, as it settles into this mass, forms a compound too well adapted to mold the comb with which it comes in contact, or close the door and suffocate the bees. It is true the combs become mouldy in many hives which have not been thus neglected, but this is a very common cause, and easily prevented. Combs which are but slightly mouldy are not materially injured.

It is a mystery to many bee-keepers even, why many swarms continue year after year, without producing either surplus honey, or a sufficient number of bees to swarm. Some, however, attribute such unproductiveness to a superabundance of drone comb, or of bee-bread (pollen) in the brood combs. But I am satisfied that it should as often be attributed to mouldy combs destroying to greater or less extent brood combs. And as bees, in common with other insects, are short lived, one limited generation of bees might follow another for an indefinite period, without profit or better prospect.

The best course to pursue with such swarms, that I know of, is to transfer them with such portions of comb as is suitable, and that worker brood comb only, to a new hive in early spring, or drive them in swarming time.

The first bee food in spring of much importance (here,) is obtained from the flowers of the soft maple. Often, as early in spring as the weather is sufficiently warm that bees can fly to the woods, this food is supplied in abundance. But as this food, (pollen) is principally for the young brood, (though not less important,) such swarms as are short of honey will still need to be fed. I. I. *East Shelby, N. Y.*

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[For the Country Gentleman and Cultivator.]

MADAGASCAR RABBITS.

These beautiful pets, sometimes called Lop-Eared Rabbits, do not receive the attention their good qualities entitle them to. They are much the largest and the most beautiful of all the rabbit family. Their flesh is far superior to that of the wild rabbit, and better than the flesh of the common domestic rabbit. I think they should be bred extensively by the poor class as an article of food, for they can be easily raised at a trifling expense, requiring to be fed only on coarse and cheap food. They occupy but little space, breed often, and come early to maturity, when full grown frequently weighing from fifteen to twenty pounds. Their skins, when tanned, make beautiful robes, their colors being handsomely variegated. As fine a rabbit may be raised in a dry goods box, placed in some shed or corner of the yard, as those raised in a warren costing fifty or one hundred dollars. I would in no way discourage the raising of these rabbits as a matter of fancy, for the breeding of them is a pleasant and instructive amusement for children, and to follow the rabbit through all the different periods of life, from the time it is deposited in its downy nest until it arrives at maturity, is one of the most pleasant observations of the Naturalist. S. P. Keator

MANAGEMENT OF THE BLACKBERRY.

At the late meeting of the Illinois Hort. Society, C. Merritt of Battle Creek, Mich., said he had been very successful with the New Rochelle—had an acre of the plants, but they needed winter protection. This he accomplished by first cutting out the bearing shoots, when with the help of two men with spades he laid down the whole in a day. The earth is loosened with a rake on the side towards which they are to be laid down, when they are pushed over with the rake, and the two men throw on earth, and a little rough litter is added. They are planted six feet apart, and cultivated each way. They are staked in spring. "Before laying down in autumn," says the owner, "I cut off the main stalk nearly down to where it bends over, and the side branches to fifteen or eighteen inches. Where there is no snow, I would cover the stalk. Last spring when I got ready to plow, I found I had only about half enough canes on the acre. I manured in June with a wheel-barrow load to every two hills. They were a "sight" when they blossomed. The crop was estimated at from 100 to 150 bushels, and I am confident was not less than 100. I picked 60 bushels, and sent them to this market; brought $4.50 to $5 per bushel. Four stalks in a hill are enough. I sell the sprouts or cut them down. I think from 120 to 150 bushels can be raised on an acre. Some of the ground I mulched with cut cornstalks, which was an improvement. My soil is a gravelly sand with loam, sub-soil gravelly and open, but not leachy. The berries were uniform in size, except in the last of the season."

Novices should understand that summer pruning is in most instances essential to success, that is, pinching off the leading stem when 3½ or 4 ft. high, to induce the growth of side branches, which also must be pinched off, if they extend far—the object being to produce that short stubby growth which best favors fruitfulness. Boys who pick wild blackberries at the east, have often observed that such bushes as the cows have browsed partly down, are loaded with berries; and this summer pruning is on the same principle, although in not quite so rough a style.

NEATNESS IN THE FLOWER GARDEN.

The principal characteristic of the flower garden should be neatness. No matter how much may be expended on new and beautiful plants or how great the number of flowers, yet if neatness be neglected, the effect of the whole is spoiled in the eyes of all persons who have been accustomed to see well kept gardens. A beautiful flowering plant may have all its loveliness destroyed by the remains of dead flowers or decaying leaves, or a fine specimen may be devoid of attraction for want of a little care and attention in tying up or training. The lawn may be robbed of its beauty by allowing the grass to remain uncut until it more resembles a luxuriant meadow than an ornamental portion of the flower garden, whose chief beauty consists in a smooth, closely shaven sward with a velvet like surface. So too, rambling, straggling shrubs, climbers with no provision of strings or trellis, walks filled with weeds, borders foul with grass and noxious plants, are all unsightly to a person with a true perception of the proper keeping of the garden.

The walks should be always kept free from weeds, and neatly raked. If grass edgings are used, they should be kept neatly pared.

The borders should be frequently hoed and raked, not only to destroy weeds, but also to break up the surface, which soon becomes baked and hard under the joint influence of sun and rain.

All tall growing plants, or those with tall flower stems, should be tied to neat painted sticks, which should be prepared in large quantities of all sizes during seasons of leisure. Herbaceous plants of the large sorts should have their stems loosely tied together, or else heavy storms will beat and break down the outside stems.

All flowers and leaves which have begun to decay should be immediately removed, unless seeds are wanted, in which case only the dying petals of the flowers should be taken away.

Climbing plants should have trellises or strings to run upon the moment they begin their growth, and those sorts which will not run should be tacked to the wall or fence with neat strips of leather.

All annuals which have finished their bloom should be removed, and early flowering herbaceous plants may be cut down to the ground as soon as the flowers have faded, when they will probably make a second growth and bloom.

Straggling shoots in shrubs should be at once cut out.

Many more rules might be given for the proper care of the garden, but the above are sufficient. The vigilance of the cultivator will at once detect the want of neatness in any department of the garden, and will remedy it.

G. B. H.

[For the Country Gentleman and Cultivator.]

ONIONS vs. MAGGOTS.

Mr. Editor—In common with every farmer in this vicinity, I have suffered severely in the cultivation of onions, from the ravages made by maggots. I made several experiments which were attended with little or no success, until I hit upon the following expedient:

I took about two quarts of tar, put it in a kettle, and poured six or eight quarts of boiling water into it; let it stand till cold, then took a common watering pot, stopping up all the holes in the filterer save one, and filled it with this tar water; when the onions came up, I applied it, running a small stream of the water along on each row. I continued its application throughout the season, and the result was I did not lose an onion.

Last season, having much other business to attend to, I neglected to apply it but two or three times, and I lost probably one twentieth of the crop. I am confident that this is a sure preventive, and would recommend every farmer to try it. It is simple, and does not retard the growth of the onion.

Levi Remick.

Kittery, York Co., Maine.

[For the Country Gentleman and Cultivator.]

NUTTING'S ROOT CUTTER.

Messrs. L. Tucker & Son—On page 107, Feb. 13, 1862, "Country Gent.," is a communication from R. Nutting, relative to his "New Root Cutter." On reading the article I enclosed the price to D. Odiorne, Randolph, Vt. The Cutter was forwarded—I was disappointed, and on receiving it at the R. R. Depot, would have sold out at less than cost, but being no purchasers there, I took it home—tried it, and changed my mind. I would not sell it for four times its cost if I could not procure another of the same kind.

It cuts very fast—cuts in curved pieces which are left in a broken condition, so that no animal could choke with them; but does not cut quite so thin as Mr. Nutting says it will—which I presume is accounted for by the fact, as they wrote me, that my cutter is not so good as the average, being the last one on hand at the time.

Fair Haven, Ct. W. J. MORRIS.

[For the Country Gentleman and Cultivator.]

TRIMMING THE GRAPE.

Use of Shellac Varnish for Vegetable Wounds.

1. *The Time.—a.* This necessarily is done mostly in autumn as a necessary preparation to laying down the wood. But I prefer at that time to leave more numerous and longer branches than I intend to have grow the next spring. This is done to guard against accidents and the unusual pressure of severe winters, especially when they follow a summer of imperfect growth, such as that of 1859 and 1860—*b.* In the spring after the wound is laid open to the sun, an experienced eye, especially with the aid of the knife, will readily ascertain the condition of the wood and buds, and guide in the additional thinning and shortening of the wood—*c.* In the use of shellac varnish one may trim just before the buds open, and indeed later, provided it be done in a cool morning, with rapid movement. Shellac gum being soluble in alcohol, but not in water, the varnish dries almost instantly when applied to the cut surface of the grape or other fruit tree. The close adhesion of the varnish filling the very pores of the wood, and its subsequent insolubility causes a perfect closure of the pores of the wood.

2. *Mode of Making Shellac Varnish.—a.* Take a broad-mouthed viol from the size of two or three ounce to a pint. Fill it two-thirds full with strong alcohol, and put in shellac gum until, after solution, it is like very thick paint; cork it tightly to prevent the evaporation of the alcohol, putting in more of the latter whenever it becomes too thick to spread freely—*b.* It may be readily applied with the end of the finger or a small stick. It is best, however, to use a small painter's brush, one whose brush is as broad as a large thimble—*c.* On ceasing to use this brush, wipe it as clean as you can conveniently, and then let it dry without keeping it in the bottle. When you wish to use it again you have but to pound it gently when it will soften readily without the necessity of using alcohol to clean it, the shellac varnish being much more brittle than that made from other gums for the use of furniture—*d.* On using this varnish in cases where you fear bleeding, it is necessary to act with speed, applying the varnish almost instantly after the limb is cut. If this is not done, and the sap begins to flow, draw the dry palm of your hand, in a dry cloth, over the cut, to remove the moisture, and then apply the varnish.

3. Considering the cheapness and manifold uses of this varnish, every householder who has even a few shrubs and fruit trees to trim, should keep it ready prepared, as with the aid of it he may trim almost every tree at any season during the summer. These facts are familiar to most cultivators of grapes, and they are repeated here for the benefit of the inexperienced.

Paint for Marking Labels.

1. In the business of the garden and orchard marked stakes and labels are often needed for temporary purposes, as the designation of rows of fruit trees, new varieties of corn and potatoes, flowers, &c., or rows of seeds sown in hot-beds.

2. The staves of an old barrel sawed in two and sharpened at one end answer for larger purposes, and short pieces of hemlock lath, planed smooth on one side, for smaller ones. Those who happen to have blocks of cedar cut off from long posts, or even the sound portion of cedar posts that have failed, will find them especially useful wood for splitting up for either large or small marks and stakes.

3. For paint to mark such stakes and labels I have found nothing so cheap and ready as shellac varnish, into which a little lampblack had been well worked. Whether used in making letters or figures it should be applied with a small brush. It is better applied to the naked wood than to a painted surface, to which, especially if the paint be fresh and glossy, it does not adhere well.

Such paint will continue legible until the stakes decay. Its superiority to oil paint is seen in two facts—it dries rapidly, and it does not spread on the wood when first applied, as does oil paint on many surfaces, and become illegible.

So also this same mixture is superior for the same reasons for marking barrels, boxes and bales of goods.

Utica, N. Y., March 27, 1862. C. E. GOODRICH.

[For the Country Gentleman and Cultivator.]

PLACING TILE DRAIN.

Eds. Co. Gent.—I observe an article on "laying drain-tiles," from the pen of Mr. Fish, in your issue of Feb. 27th last, in which he recommends the use of wooden bearings to keep the joints in place, instead of collars.

As cheaper and better than the plan recommended, I suggest the following: Take a piece of tough hickory or oak wood, four or five feet long, of the size of the tile to be laid, and dress it into a triangular or prismatic shape. After the bottom of the ditch is properly prepared, lay the triangular stick above described where the tile is to be placed, and standing upon it, with the pounder sink it into the clay, so as to form a bed for the tile. After the first impression is thus made, the stick, moved forward half its length at a time, will be kept in place while the forward end is pounded down. In this manner a groove of compact bed can be formed readily and cheaply, which will permanently hold the tiles in place. Jno. Evans.

Evanston, Ill., March 16, 1852.

[For the Country Gentleman and Cultivator.]

IRRIGATION AND WIND-MILLS.

Friend Tucker—Having just read a communication in The Cultivator on irrigation, a thought struck me that I might benefit the species homo by a suggestion. As not many farms contain a spring or pond sufficiently elevated for irrigation of extensive acres, a well on the height of land, with a wind-mill to raise the water, would overcome every objection; which can be built for $25, and that will tend itself. A small reservoir would never get empty, or if the well was dug in a low wet place that needed draining, and the water sent by a lead pipe to the high ground, it would serve a double purpose.

While on this subject, the wind-mill may be made to pay double interest by sawing wood, for which it is well adapted; and if at the house or barn, may be used for various other purposes, such as washing, churning, and cutting straw or fodder, thrashing and grinding coarse grain, and if the owner is half mechanic, he can busy himself in sawing shingles for repairs about the premises. Finally, I will back my suggestions by offering to build a wind-mill on any barn within a reasonable distance from home, for one hundred dollars, that I will warrant capable of doing all the thrashing, cutting feed, sawing wood, and grinding both meal and axes, for any farm in this State; and further, (if in this county,) will guarantee wind sufficient for all purposes if improved. Alvan Walker.

Oswego, N. Y.

[For the Country Gentleman and Cultivator.]

SULPHUR FOR LICE ON STOCK.

I have seen and tried numerous remedies to rid stock of vermin, but never succeeded so well as with sulphur on a lot of calves last spring, by giving it in their feed. I tried it before, but it did not seem to do the work, and am now satisfied it needs to be continued for some length of time in order to get well incorporated into the blood of the animal, and then I am of opinion that they will decamp without further notice. I know that oil or grease will destroy them, but think it requires a direct application to effect the object. A. Moss. *Boone Co., Ill.*

[For the Country Gentleman and Cultivator.]

RAISING LAMBS FOR BUTCHERS.

First, in the selection of ewes, I know of no better class of sheep for the system of this section of country, than good York State ewes; perhaps in a drove of 1,000, from 200 to 500 of the proper grade might be selected. I should pick for a sheep of a particular wool, as all our best farmers have proved that a long open wool does not do; nor yet (although better) the little nasty Merino. The former produces a lamb too coarse, not fattening well, and the ewe is too long in getting fit for market; the latter has a lamb that fattens well, but neither produces enough wool or mutton herself to be profitable. In five minutes, with the sheep before us, the best could be pointed out, and better understood than a page of writing will explain. A close compact fleece about the grade for fineness, of half Merino, is our choice. Next, I should select broad, heavy set, short-legged ewes, (as they are not to travel much more,) without horns, about four years old; the bag examined, that both teats shall be good; in condition just fairish, as, if too fat, it may argue she has been a poor milker. The time of year for procuring the ewes, should be August or forepart of September.

Now a very important matter comes up, on which depends one-third the profit of the lamb crop, viz., are you buying of a drover that you can depend on his word, and when you ask him if any ram has run with these ewes, does he answer no? I have found no exception to the rule, that all ewes, in lamb when bought, produce inferior lambs, and the butcher rejects all such until the last, if he will have have them at all. They are perhaps got by a common ram, and he without being in a proper condition for service; and the ewes after being served, instead as they should be, improving in condition slowly but surely, have been from driving, running down very fast. Being sure you are all right so far, turn your selected ewes on short pasture for at least two weeks.

But I have forgotten another very important point, viz., buy only so many ewes as you are prepared fully to keep well; not only for the fall when buying, (your plentiful fall pasture may tempt you,) but through the winter, and especially through the spring. Between hay and grass is a hard time for sheep; but this leads me to root-raising, which must be now passed over.

As worth more than all the dictatorial pages I might find time to write, to the lamb-raiser, I will here give some actual experience. About 1840 to 1845, being tempted to buy more sheep than I had keeping for, in the fall I procured 25 ewes, (having a few on hand before.) All went well until, towards spring, the ewes began to lamb, but from scarceness of good clover hay, many of them had not milk enough to keep their lambs alive; this, combined with want of warm shelter for the young lambs, caused a great loss in the number of lambs raised, so that I only raised thirteen lambs from the twenty-five ewes, and the thirteen so stunted, that in June I could only get $1.50 per head, clear of freight, for them; and the ewes were worth no more in the fall than one year before, when bought. I wonder if there are any sheep raised on the same principle in the States of New-York, Ohio, and so on West. I think so from their appearance.

Now the above was one of the most profitable deals I ever made in the sheep line—"bought wit is the cheapest." I soon began to keep a small flock. I think it was in 1846, I kept only 8 ewes, and sold more dollars worth of produce than from the 25. In 1847 I wintered 4 ewes, and not only made more profit than with the 25, but sold more dollars worth from the 4 than from the 25, besides the greater expense of keeping 25. From my sheep-book I will here give a few particulars of the six lambs raised from the 4 ewes:

1st, dropped Feb. 4; weighed March 3, 23 lbs.—June 2, when sold, 82 lbs.; single. 2d, dropped Feb. 20; weighed March 3, 8½ lbs.—June 14, 76½ lbs.; twin. 3d, dropped Feb. 20; weighed March 3, 9½ lbs.—June 14, 81 lbs.; twin. 4th, dropped Feb. 23; weighed March 17, 14½ lbs.—June, not weighed; twin. 5th, dropped Feb. 23; weighed March 17, 14¾ lbs.—June 14, 83 lbs.; twin. 6th, dropped Feb. 26; weighed March 3, 13 lbs.—June 14, 79 lbs.; single.

Note.—1st, all began to eat meal at three weeks old; some, a little at two weeks. 2d, sheep fed some turnips and two quarts corn-meal twice per day. 3d, got out of turnips; run on winter grain—did not do so well. 4th, gained from April 1st to 8th, 21¾ lbs. (the six,) in one week. 5th, took off grain—fed small potatoes, with little meal; gained from April 8th to 15th, one week, 24½ lbs.—over 4 lbs. apiece. 6th, one youngest twin gained more than single lamb from April 22 to May 24. The lambs were sold at $3.50 apiece—a large price that season.

I would correct here a mistake in your article, Messrs. Editors, about the weight of lambs; it should read, live-weight not dressed, as a young lamb very fat early in the season, weighing 50 or 55 lbs. alive, will dress 8 lbs. per quarter—which is good for early lamb.

I might give page after page of figures and experiments, but the above must suffice, except about one lamb fattened in 1851. He was one-half South-down; dropped Feb. 6th; weighed Feb. 23, 24½ lbs.—March 2, 31 lbs.—March 11, 38½ lbs.—March 18, 44½ lbs.—March 29, 53 lbs.; when sold to Mr. Charles Kent, a New-York butcher, for $4.50—just 51 days old—which lamb was said to be, of its age, the best ever dressed in New-York market. My readers need not expect to beat it often; and it would be proper in this place to say that from 3 to 4 lbs. per week is a very good gain—I never was satisfied with less than 3½ lbs. per week, or a half pound per day, for fattening lambs; but lambs for breeding or stock sheep, is a different matter.

I have run so far off my intended track, that I must close for this letter without getting back.

Holmdel, N. J., April 8, 1862. J. C. TAYLOR.

[For the Country Gentleman and Cultivator.]

CORN AS FUEL IN THE WEST.

The abundance and extremely low price of corn have led many farmers at a long distance from coal or timber, to substitute corn as fuel for the kitchen and parlor fires. Corn cobs are excellent fuel—corn itself on the cob burns well, and gives a strong abundant heat. In many places in the West, corn cannot now be sold for ten cents per bushel. Wood and coal have to be drawn a long distance and the corn sold to pay for them. The corn is at hand—and in many places its consumption for fuel in the kitchen fire is economy.

We have heard many persons argue that it is wicked to use corn for such a purpose, and yet they would consume it in alcohol or as burning fluid without a scruple.

A bushel and half basket of corn will last in a moderate or not very severe day, about ten hours. In a severe day of cold and wind, from two to three bushels would be consumed.

We have travelled much in this country during the past winter, and seen very many fires of large ears of golden corn. To one "brought up" among the wooded hills of southern New-York, we must say this does not *look* right. Yet we argue that in corn-burning as in other business, *men* should consult their own interests.

Amboy, Lee Co., Ill., March, 1862. G. W. H.

Unruly Cattle.—An ox or cow that is accustomed to throwing fences, may be prevented doing so by taking a large wire and bending it in the shape of a bow; then bend the points in the shape of a fish-hook; tie two strings to the wire, place the hooks in the nostrils lightly, and tie one string to the point of each horn. This will prevent the most unruly ox or cow from throwing fences.

H. B. O.

THE CULTIVATOR.

ALBANY, N. Y., MAY, 1862.

☞ The New York State Fair is to be held Sept. 30 —Oct. 3, probably at the city of Rochester.

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☞ Hon. Jos. A. Wright, U. S. Senator from Indiana, sends us a report of the debate in the Senate, upon the House bill establishing "a Department of Agriculture."

This bill, as was remarked in the debate by Senator Simmons, advocating its passage, "simply detaches the agricultural portion of the business of the Patent Office from the Interior Department, and makes it an independent Department." It does not appear to add particularly to the scope or efficiency of the Agricultural operations of the government, but only christens the old machinery with a new name; and the best argument which Senator S. could find for it, was that it "is simply a compliment to the great leading interest of industry." He took pains to repeat subsequently that he considered the bill "merely a compliment," as though the politicians, while they can find no time to perform any real service for the Farmers, might at least touch their hats officially to them, now and then,—and closed by trusting that the Senate would "now give them this little boon, if for nothing else, merely to gratify their pride."

With all due thanks to Senator S. for the pains he has been at in the matter, we think there is very little "pride" involved on the part of the farmer. The trouble has been that the heavy expenditure purporting to be for his benefit, has not been well and judiciously applied. It has only been his hope that a department might be devised which should not adhere to the traditions, nor be subject to the mismanagement, which have characterized the former bureau—in a word, which should be worth to the country what it cost.

Senator Wright, who evidently perceives that merely a change of name is not a very substantial "compliment," at once proposed a substitute, much more nearly in accordance with the views heretofore expressed in this journal. He supported his proposition in an extended and forcible speech, laying especial stress, as we have done, upon the importance of making it a department for the collection of statistical information as to the condition growth, requisites and attainments of our Agriculture. Senator W.'s bill is really a step in advance; it contemplates a programme which, if well carried out, could not be otherwise than of incalculable benefit. While some might be disposed to suggest modifications in its subordinate details, the general intent of the whole is in the proper direction, and if a competent man can be found to occupy the post of Commissioner, his experience at the end of a year would enable him to report upon whatever amendments might prove necessary in order to secure the greatest efficiency of the force and money at his disposal.

We have not space at present to publish Senator W.'s bill, but shall watch its progress in Congress with great interest.

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Iowa Sugar.—I enclose a small sample of sugar from the Chinese sugar cane of our own manufacture; we have a considerable that granulated from the crop of 1860, and also of 1861. I have made considerable syrup or molasses during the fall of the last three years, and think that I have learnt considerable by experience, and if I thought my little experience would be interesting to the readers of the Country Gentleman, I would give it to them. J. F. Gritman. *Linn Co., Iowa.* [This is one of the nicest samples, if not the *very best*, we have yet seen of Sorghum sugar. Our friend will confer a great favor by giving us the results of his experience, and the method of manufacture adopted, as fully as possible. Eds.]

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☞ To Charles L. Flint, Esq., Secretary, we are indebted for copies of the Ninth Annual Report of the Massachusetts State Board of Agriculture for 1861. Issued with the customary promptness, its contents are of fully the usual degree of interest and value.

Sub-Committees of the Board were appointed to report upon different subjects now of especial interest in the Agriculture of the State, and the papers thus contributed form the leading feature in the volume. They include one upon the Diseases of Vegetation, by Dr. John C. Bartlett, upon Cattle Breeding and Feeding, by Dr. Geo. B. Loring, upon the Protection of Sheep, Lambs, &c., by R. S. Fay, Esq., upon the Wastes of the Farm, by Jas. S. Grennell, Esq., and upon Wheat Culture, by Mr. Levi Stockbridge. The other papers contained in the volume make up a useful variety; and we hope to refer hereafter, as time permits, to several of the number—especially to the tables of the Agricultural Statistics of the State, which appropriately occupy about 70 pages near the close of the volume.

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☞ We have already mentioned the Trial of Reapers and Mowers to be held the coming season at Dixon, Illinois, by the Agricultural Society of that State. The exact time is to be announced by President Van Epps, who resides at Dixon, according to the condition of the crops. The following are the prizes and the regulations adopted:

For the best combined mower and reaper	Diploma and	$75
For the best reaper	do.	50
For the best mower	do.	50
For the best one-horse mower	do.	20
For the best heading machine	do.	50
For the best grain binder which can be readily attached to any ordinary reaper		Medal.

Headers to compete with headers. and not with other machines.

That an entry fee of fifty per cent. upon the cash premiums offered be required to be paid by each exhibitor.

That no award shall be made in any case unless two or more machines compete for the same.

That entries may be made with the Corresponding Secretary, at Springfield, until the 15th of June next.

That the machines competing be required to be on exhibition at the State Fair at Peoria, at which time and place the awards shall be publicly announced.

That the details of the requirements for the trials and scale of points be such as have been sanctioned by experience in similar trials in the United States. and that the Executive Committee of this Society be the awarding committee.

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☞ The fact that Wheat will "winter-kill," while Chess will survive and flourish, is the source, we are fully convinced, of nearly all that we hear about so-called "Transmutation." A correspondent at North Madison, Ind., supplies an instance in point; in a letter just received he says: "When I last wrote I mentioned that my wheat was badly winter killed, but forgot to say that I sowed fourteen grains of chess in a place by itself. *Every grain* came up, and it stood the winter well; having plenty of room, it stooled or tillered very much, and I think I would have had a pint of produce, but when it got nearly ripe the chickens ate it all up, and prevented me from measuring it. I have never found wheat *all* to come up, and that does come up never all stands the winter."

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Seeding to Clover—Plaster.—No better investment can be made by the farmer than in seeding all his winter grain fields liberally with clover seed, to be followed by a top-dressing of plaster, as soon as the young clover plants are fairly above ground. The same is true of land in spring grains, and at the present low price of seed, it should be used more extensively than usual. It is the true renovater of our soils, either plowed under green or fed out on the farm, and the latter seems the most economical and profitable. Do not forget that top-dressing clover with manure in midsummer, will largely increase its growth, and its effect upon the fertility of the soil.

☞ In the Country Gentleman of March 27th, we asked the assistance of our correspondents in estimating the effect likely to be produced upon the Crops of the present year—especially in the West,—by the withdrawal of more than half a million of men from the field of labor to take part in the suppression of the great Southern insurrection. We are pleased to learn that the very important Agricultural State of Ohio promises to show *no falling off:* Jno. H. Klippart, Esq., Secretary of the Board of Agriculture, writes us under date of Columbus, O., March 29th—

"So far as Ohio is concerned, I learn by replies to my circulars issued to every county in the State, that there was last year, and will be this year, no diminution in the breadth of ground cultivated. And what to me is somewhat surprising, is the fact that farm labor is as abundant as usual, of a better quality, and at no higher rates than in former years. Ohio has 90,000 men in the field, and in camp, and yet so far as her industrial resources are concerned they are apparently not missed. Is it possible that in Ohio we have attained the maximum of production, and that the 90,000 now in service were a surplus population, with whose services we could dispense without disturbing our industrial economy? In what direction shall we seek for a solution of this anomaly? Will the extraordinary amount of machinery introduced explain it?"

To Mr. Klippart's queries we shall not at present attempt an answer; they may suggest responses from other sources, and they certainly afford room for careful thought. It would be matter of interest to receive information from other Western States, upon the subjects mooted.

As to Illinois, a letter from Livingston county, since received, states that there, "no diminution can be seen in respect to the amount of land that will be worked this season. Those remaining seem to feel called upon for greater exertions to make up the loss of their brethren now on the field of battle. Great quantities of sorghum will be raised this season. Parties from the east are looking it up with their usual shrewd calculation and energy, and the amount planted this year will be immense."

Destroying Weeds.—B. J. Culvert of Fresh Pond, Long Island, informs us he has purchased a farm which he finds much infested with wild radish, (which we suppose to be the Raphanus raphanistrum,) and which he is destroying in the following manner: He sows oats early, with 150 lbs. of guano, and three bushels of seed, per acre; this is cut for fodder the middle of June, and yields about three tons per acre, requiring more curing than hay. Early in autumn the land is plowed and sowed a second time, and some five tons of fodder are thus obtained from an acre. The frost kills the few plants of the weed that are left. The second season, the process is repeated, by which time he thinks the weeds will be eradicated. We would like to hear the final result of the experiment. In answer to the inquiry of our correspondent, we think barn-yard and stable manure the best for enriching the soil, but a portion of ashes, marl or lime, will doubtless be a valuable auxiliary.

Sorghum Culture in Ohio. — There was considerable sorghum cultivated here last year, and there will probably be a much more extended culture of it the coming season. Last year the cane did not yield per acre so much syrup by one-third as the year previous—the season was too cold. I manufactured one thousand gallons of superior syrup, and had the cane been as rich as the cane of the previous year, it would have yielded fifteen hundred gallons. I sold all readily at 60 cents per gallon. There was probably made in this county between thirty and fifty thousand gallons. I intend to make three or four thousand gallons the coming season. The cultivation of sorghum will undoubtedly become a new resource to western farmers. P. A. Smith. *Troy, O.*

☞ We lately noticed the statistics of the Grain Crops of England in 1861, collected to show the deficiency in the yield obtained last year, and the quantity probably to be required before another harvest. A supplementary return has since been published, with reference to the breadth of land put under winter wheat last autumn, and the present prospect as to the yield of 1862. From the tables therein included it appears that the acreage of winter wheat is unusually great; and not only has a *very large* breadth been sown, but the seed has been put in under the most favorable circumstances. "If, to some extent, rather too late, (as a rule,)" says the Mark Lane Express, "yet the mildness of the winter has favored it, and the plant generally is strong, healthy, and without breaks in the rows. It would be needless to give any condensed table of this schedule, as, with the exception of about four or five cases, the whole of the returns agree in their accounts, both as to the largeness of the breadth and the wonderfully fine appearance of the plant. If no disaster intervene between now and harvest, there is the prospect of this important product yielding the largest amount of produce that ever was known."

England has been forced, during the past two years, to pay such immense sums to foreign nations for Breadstuffs, that it is no wonder if her farmers are now determined to exert themselves to their utmost capacity to enlarge the production of the country. The same paper from which the above quotation is made, contains the official tables of imports and their computed value for the years 1860 and 1861. We derive from them the fact, worthy of being placed on record here, that the value of the Grain and Flour, including under the former, wheat, barley, oats, peas, beans and Indian corn, at $4.84 to the pound sterling, was:

Imported into Great Britain in		1860	$152,134,766
do.	do.	1861	168,193,349
Aggregate for two years			$320,328,115

What immense profits must the manufacturers and merchants of those little islands derive from their commercial intercourse with the rest of the world, when they are able to pay out such a sum as this in two years for the mere bread which the people consume.

☞ Mr. Jurian Winne, of Bethlehem near Albany, whose operations in the Winter Feeding of Sheep we have noticed in former years, has been fattening about four hundred Leicesters and Leicester grades during the past four or five months. They were lately sold in three lots,—one lot averaging a weight of 146 lbs. per head, the second lot 169 lbs., and the third lot 238 lbs. each.

The Iowa State Fair, 1862, will be held at the city of Dubuque, on the last day of Sept., and three first days of Oct. Dubuque is the largest city in Iowa—is on the Mississippi river, 180 miles west of Chicago, at western terminus western division of Ill. Cent. R. R. and eastern terminus of Dubuque and S. C. R. R. This location can furnish a local population of some 26,000, within 12 miles. The Fair grounds will be only five minutes walk from the Post Office.

The Illinois State Fair for 1862, will be held at Peoria, commencing on Monday, Sept. 29, and continuing six days. A trial of reapers and mowers will be held during the summer at Dixon, Ill. The time and programme in full will be published soon.

Farm Accounts.—In keeping farm accounts, I find Hough's "Farm Record," prepared for a series of 25 years, to answer every purpose, in connection with a daily diary—cost of this work, $3. Every intelligent husbandman should keep his Dr. and Cr. accounts with stock, fields, and grains, balancing each year's operations. A few minutes each day, or once each week, (if transferred from daily memoranda,) will enable him to do this satisfactorily, and correctly enough for all practical purposes. "W."

Inquiries and Answers.

Time to Cut Timber.—When is the best season to cut building timber other than evergreens—say oak, maple, beech, basswood, &c., to be cured in the old fashioned way after it is in the frame? Our people differ very much upon the subject; some say when the leaf is off; others when it is on—some say when the bark will run; others prefer the winter in February. Another class, that when the sap is out of the wood, which they claim to be in summer, while others maintain that that time is in February. I have had but little experience, but that little leads to the time when the bark will peal, which is generally in the early summer. What say you? It is of some importance to me just now, and I should like to know. G. Clarke. *East Springfield, March*, 1862. P. S.—I notice in many of our old frames, much of the oak has powder-posted. That ought not to be. I am a great lover of oak on account of its strength, but don't want a powder-posted building. I don't mean white oak; that has all left long ago. [Summer is the best time to cut timbor, chiefly because it seasons rapidly at that time. It should, of course, be left in the logs as short a time as practicable. Timber cut in winter is long drying, and incipient decay commences beforo the process is completed. There is rather more sap in a tree in winter and early spring than in summer, when the leaves have carried off a part. The wood is also rather less watery after midsummer than before, and dries better, and makes harder seasoned stuff. It is therefore not quite so well to cut it till rather after midsummer.]

Osage Hedge.—I have determined to set out an Osage Orange Hedge. Shall I plant it *this* spring, or cultivate the ground this year, and plant the hedge next year? In *your* judgment what is the best distance to set the plants apart? H. S. Jr. *Dayton, O.* [If the ground can be made in good order this spring, it will save a year's growth to plant now. A good covered drain should be within a few feet of the hedge. Six or eight inches have been usually recommended, but we think a foot a better distance for the plants, as, by having more room for the roots, the trees will have double the strength above ground.]

Peach Worm.—Will you give us some advice how to keep tho worms from destroying our peach trees? They entirely bark them at the ground. mrs. r. w. *Indianapolis, Ind.* [We can only repeat the mode we have so often prescribed before—to cut the worms out with a knife. This is a sure remedy—after a worm is killed he cannot possibly do any farther injury. Any man, stupid or otherwise, may do the work—always observing this single rule, that wherever he sees the saw-dust-like exudation near or at the surface of the earth, there he will find a hole or cavity eaten into the bark, which he is to follow with the point of his knife till he finds the grub. An active person will thus examino and rescue hundreds of trees daily, and if done timely and two or three times a year, nothing need be feared. It is by far the easiest and most effectual remedy.]

Cough in Horses.—Will you or some of your subscribers please inform me through the columns of your paper, what will stop a horse coughing? He has not got the heaves yet—had the horse distemper three years ago, and it left him with a hacking cough. I have tried patent medicines to my satisfaction He is six years old and sound otherwise. p. *New Lisbon.* [A specific prescription can be pointed out only by knowing the particular cause of the cough—but as a general rule, which can never injure and may do much good, give moist or succulent food, such as grass or clover during the summer season, and carrots or other roots, wet or scalded chopped food, good cornstalks, &c. in winter. Slippery elm or flax-seed tea would be useful in recent cases, but would probably not produce much effect on a cough of very long standing. Work moderately, never sweat the animal much nor overdo, and blanket well in cold weather or after working. If any thing will mitigate or cure the disease, it will be this succulent food and careful nursing. The latter is indeed worth all the "patent medicines" that ever a poor sick animal was cursed with.]

Beans on Rich Land.—I have a piece of ground, allowed to run fallow the coming season, previous to being put into wheat, and have concluded to put it into field beans. My neighbors say that the soil is too rich for beans, and that they have had but poor success upon the same quality of soil, their beans all running to vines. I havo read the several articles in your paper, and from them must conclude that this theory is a false one. The soil is a sandy loam, good quality, on which was harvested a corn crop last fall. Is there any particular bean that is better adapted for this kind of soil than another. p. *Montour Co., Pa.* [We have not found any common soil, well manured, too rich for beans, but cannot pronounce with confidence in relation to that above mentioned. If the "neighbors" have given it a full trial, their experiments aro more conclusive than any opinion merely—but thoy may have been imperfectly or badly performed. Small varieties of the bean, having small stems but bearing well, would do best for rich land as a general rule, but we could not mention any that have been cultivated especially for this purpose.]

Apple Seedlings.—Can seodlings for a nursery be raised from sowing apple (or other fruit) seed in a dry state, in the spring of the year? If not, how should the seed be prepared to sow when the weather is suitable in the spring? I wish to sow some apple seed (now dry) this spring. s. [Much will depend on the *degree* of dryness, according to the nature of the place where they have been kept. Some might grow if merely planted, although they would be a long time starting. Others would need scalding, that is soaking for a minute or so in hot, not boiling water—in which case only a pint should be treated at a time, as a larger quantity will be too long cooling, and the heat will kill them. In some cases the process will require repeating. When the seeds have become very dry, the scalding must be alternated with exposure to freezing. Our correspondent better try small portions of his seed in these different ways in a hot bed, or box of moist earth in a warm room, and observe the result. The trouble will be comparatively small, if the seed are of much value.]

Propagating the Maple.—I wish to know whether the Rock or Sugar Maple, can be successfully propagated by any method except by planting the seeds. I have long been in the practice of grafting and budding apple, pear, and other fruit trees, in the usual methods, with fair success; but have never succeeded with the maple. I have repeatedly made the experiment, but have invariably failed. Now if you or any of your correspondents know of any method by which the maple can be disseminated by grafts or buds, as we multiply the apple, pear, and the other fruit trees, I wish you would give the information in The Cultivator. If there is any mode by which this can be readily and conveniently accomplished, perhaps I may send a few thoughts on the subject for publication at some future time, showing that possibly it may become in more way than one a matter of national importance. Elisha S. Fish. [The maple is so easily raised from seeds, that there seems to be no object in propagating it in any other way. Fruit trees are grafted or budded for the purpose of extending the varieties, but no such care is required in raising maples. There is no doubt that with sufficient care and skill, the maple might be both budded and grafted, but there appears to be no object in adopting a difficult mode, while a simple and easy one is at hand.]

The Peach Borer.—I cut the following new remedy for the peach borer from the Terre Haute Journal: "Mr. H. H. Teel of this city, informs us that the gas tar applied to the foot of peach and other fruit trees, where the worms are in the habit of working, is an effectual remedy against the depredations of these destructive vermin. Mr. Teel informs us that he has used this remedy successfully for two or three years. Gas tar can be obtained at a mere nominal price." Is it of any value? s. g. *Eugenie, Ind.* [Gas tar may bo useful in *excluding* the grub from the peach if it does not injure the trees. There is a difference in its quality, and while some might bo harmless, others would corrode and destroy the bark. While the remedy of cutting out the peach grub with tho knifo is so easy and effectual, it should be adopted in preference to any external application, which cannot kill the insects that have already gained possession. Soft soap is the best application for preventing the entrance of the apple borer, but a flexible wire or stick is the only way to kill those which have cut far into the wood.]

Ashes.—At what season should ashes be applied to clover to produce the best effect? b. a. [A good time to apply is early in spring, so that the spring rains may dissolve the soluble parts of the ashes and carry them into the soil.]

☞ Is there a pear called tho Roxbury Pear? I have been informed that they have such a variety in tho vicinity of Boston, Mass., and that it is an excellent variety; and also if there is an apple called the Holtin Sweeting? E. N. Lee. *Wash. Co., N. Y.* [We know of no varieties by the above names.]

☞ Can you tell me where I can obtain *pure* sorghum and tobacco seed? j. s. *Erie Co., N. Y.* [Of J. M. Thorburn & Co., 15 John-st., New-York, we presume.]

Harvesting Clover for Seed.—Please inform through The Cultivator, if there is a machine in successful operation for harvesting clover, taking the heads only, and leaving the straw on the ground? I noticed in The Cultivator for 1854, a description of one, but have heard nothing of it since. If any of your correspondents will inform me through its pages, of any kind of apparatus for harvesting clover seed, they will confer a favor. W. H. N. *Dela. Co., N. Y.* [A clover comb, made something like a common road-scraper in form, but larger, running on wheels, and having teeth in front for combing off the heads, was formerly used, but it seems not to have obtained general favor. Since the introduction of mowing machines, cutting the whole crop is generally adopted. If, however, any of our correspondents know of the successful and profitable use of any other machine, we should be glad to hear from them.]

Orchard Protection.—There is an orchard in this place, having hardy apple grafts set eight feet apart, slightly trimmed, for a hedge on the north and west sides. I would like to inquire whether this would not prove more profitable than the black English willow mentioned by Mr. Gardner in the March number? I think it may be presumed, that at the age of 11 years these trees will bear from a half to three bushels each yearly till 15 years old, when if found then too thick, every other one may be taken for wood; and the remainder, then standing 16 feet apart, will produce a proportional quantity with the trees set 32 feet apart. Harley Rudd. *Corfu, N. Y.* [Apple trees, planted as described, will afford some shelter, but the advantages of the willows are their more rapid growth, and the more complete protection of their tall and dense branches. Some orchardists in the Western States, where trees are cheap, plant whole orchards at one-half the usual distance, with a view of ultimately taking out a part of the trees, and the result has been a decided improvement in productiveness from the shelter to the young trees. But there is here again a drawback, in the exhaustion of the soil by the great number of trees which stand upon it, and the thinned orchard cannot afterwards be quite so good as one set at the usual distance at first.]

Warts on Cattle—Crooked Horns.—Some of my cows are troubled with warts on their udders and teats, which cause them to be very uneasy during the time of milking. Can you give me a cure for them? Also inform me of the best method to pursue, to cause the horns of cattle to grow in a good position for convenience and appearance, as they are frequently inclined to lop down, and thus in a great measure do away with the attractive appearance of the cattle. A Subscriber. [To remove the warts, tie a silk thread tightly around the base of each wart, so as nearly to cut into them, and stop circulation—they will come off in two days. This we know to be efficient; but it may be difficult or impracticable where they are numerous, or broad and flat—in which case they may be removed by cutting off, and touching the cut with a hot iron to stop blood, or by applying very strong pyroligneous acid to the wound. Lunar caustic, in a strong solution, is also recommended—also, cutting open the wart, and inserting powdered blue vitriol. We do not know the best way to give direction to the growth of horns, but have been told that a constant pressure applied to the tips while they are growing on the young animal, by a cord tied to them while in the stanchion, and running over a pulley with a weight, or by means of a yoke suited to the particular form, would effect the object.]

Corn for Soiling.—As a young farmer and one desirous of learning, I have determined to try the growing of corn fodder for green feeding, but find that among the older heads here it is somewhat discouraged. My pasture will be scant until after harvest—the same older heads say, that up to that time the green stalk is hurtful to cattle, acting as a physic upon them and scouring. After harvest I have an abundance of pasture and the corn must be left for winter fodder. Now what are the facts in the case? Does the young green corn in its early growth, have the effect or not? If so, it certainly is not beneficial or profitable. Information on the subject from any one, will be gladly received by P. *Montour Co., Pa.* [It is not profitable to feed corn as fodder until the tassels are well out—before that time the quantity is comparatively small. The "old heads" mentioned probably judge of its effects by their hungry cattle breaking into their fields at night and overgorging themselves on the succulent plants. Feed after the stalks are grown, beginning gradually, or feeding in small quantities at first, and carefully increasing the amount afterwards, and no harm can result. Corn is not suitable for soiling before harvest, as it is not sufficiently grown so early, but is excellent and profitable during the drouth that usually occurs during the latter part of summer. Clover would be better for early cutting.]

Cherry Insect.—I enclose a cherry shoot, attacked by an insect. Can you enlighten us on the subject, as to the depredator and cure? E. W. *West Bloomfield, N. J.* [The one year's shoot has a row of punctures about 25 to an inch, along one side, into the pith for the purpose of depositing eggs. We have often observed this appearance on both cherry and plum, but never discovered any serious injury to result. Larger punctures of a similar kind have been seen in the shoots of the filbert, nearly destroying the bushes. We do not know these insects nor a remedy.]

Soaking Seed Corn.—I have been recommended to soak my seed corn in chloride of lime. What will be the effect if I do so, and how is this article prepared. J. O. H. *Brook's Station, Ky.* [We do not see any advantage to be gained by the process—and possibly, unless the solution is weak, injury might result to the seed. The chloride is for sale at all drug stores, and dissolves readily.]

The Hubbard Mower.—Your correspondent H. S. Babcock says—"I would like especially to learn the comparative merits of the Hubbard and E Ball machine, manufactured at Auburn." In answer to the inquiry, I will say that I have used and been familiar with reapers and mowers for many years. For the last three years I have used Hubbard's Combined Harvester, which, for ease of draft, adaptation to the unevenness of the surface, durability, and simplicity of construction, all combined, make it in my judgment, one of the best machines now in use. William Johnson.
Near Geneva, N. Y.

How much is Milk worth to make into Cheese.—I wish to make an inquiry of some of your correspondents who have experience in cheese making. An early answer through the Country Gentleman will greatly oblige me. I want a rule for fixing the price of milk, to be bought and made into cheese, so that the price of the milk shall be proportioned to the value of the cheese. I want one that will be certain to give the cheese maker a fair profit and leave the rest to the sellers of milk. Also, the best method of making *double curd* cheese; or of manufacturing the milk of two days into one cheese. E. G. Chilcott.

Planting Pits and Nuts.—I have had a little bought wit that I did not think came too dear; got by my own experiments. All pits, such as peach and plum, will crack themselves if properly frosted; and if they dont crack themselves, they will not grow if they are forced open with the hammer. So with walnuts; they should be put in the ground as soon as they fall from the trees, and not be suffered to be too deeply covered with snow through the winter.
Newark, N. J. J. BALDWIN.

Defective Horse.—I avail myself of the privilege so freely accorded to the readers of your journal, of applying for information. I have a promising young mare, four years old this spring, of fine stock, and with the exception of a defect in her gait showing every indication of speed. Last season she acquired the habit of pounding her knees when when driven fast, causing soreness and swelling. This has been a great drawback in my efforts to develop her powers, and if not remedied will effectually dispose of my hopes of her future. Can any of your readers suggest anything? Is there a remedy? Will her progeny be likely to inherit this imperfection? Any suggestions will be thankfully received and promptly acted upon. D. B. *New-York.*

Peach Worm.—I would add to your recipe to Mrs. R. W. of Indianapolis, (p. 224,) giving the method and how to destroy the peach worm. Scoop out a hollow about the tree, and give a pail of boiling suds, or one quart of wood ashes to a pail of boiling water, spring and fall. The suds I consider preferable. I have seen fine pieces of unslaked lime placed near the tree about the first of May level with the soil. I don't find the manure heap any detriment to my trees, making the peaches earlier and good enough. I prefer this to trusting to any hired man's effectual cleaning with the knife.
JERSEY.

Bees.—I wish to inquire of the "Bee Man," why hundreds of colonies of bees have died with plenty of honey—plenty of ventilation? After a colony has perished, upon opening the hives we invariably find plenty of honey all candied or sugared and water over the comb. Is it because the honey is candied—and if so, what makes it candy—what property is wanting? Junius. *Minnesota.*

Tobacco.—What kind of soil is best for tobacco, and at what time should the seed be sown? J. Southwick. [Tobacco requires a warm, rich, mellow soil. The seed should be sown in seed beds as soon as the danger from frost is over.]

[For the Country Gentleman and Cultivator.]

The Permanence of Wooden Fences.

Editors of Co. Gentleman—It seems to me that your correspondent H. of the 20th inst. has taken rather extreme views in relation to fencing. It is true, as he says, that there has been little improvement in this matter for near a century, although there have been various modifications in the construction of wooden fences, but generally eventuating in expensive failures, and soon cast aside. After all simplicity must be the rule among farmers in these matters as well as in others. Anything involving much mechanical labor, is in general to be avoided. All mortices and tenons made in building wooden fences, while it consumes time, tends to rapid decay unless kept thoroughly painted, which is expensive and laborious. So also of materials requiring to be nailed, the rust of iron being very destructive to wood when exposed to weather. These considerations have doubtless induced the continuance of the old post and rail and zig zag fence, which last is by far the most generally used on farms here. Nor do we find it so expensive as your correspondent H. seems to think. According to his view a rail or board fence lasts only about ten years. That is quite a mistake and can scarcely be said of fences built of the poorest materials. I will give a few instances which have fallen under my immediate observation. More than fifty years ago my father had a new partition rail fence made across a field, about forty rods in length of chestnut rails in the zig zag form set on stones, drawn from the field, about eighteen inches high. This same fence is now standing, the foundation and lower tiers of rails having never been changed. In making this kind of fence, we usually select the largest and best split rails for the lower portions of the fence, and as we come towards the top lighter and poorer materials are used, generally ending by a round pole, termed a rider, on the top of the stakes. Such materials of course do not last as long. The top therefore of the fence named has had a few rails replaced in repairing. Now I have no reason to believe that the most of this fence will not last until the close of the present century. I am quite sure that much of it would be sound and good at the expiration of that time, could the growth of bushes and running vines be kept down; more especially ground ivy, which is poisonous to many if handled, and which sometimes almost covers the fence. These pests get among the cobble stones carted from the fields, in preparation for mowing, and thrown under the fence and are very difficult to extirpate; so much so that they are allowed to run rampant. As to the great waste of land occupied in making this kind of fence I would remark that it is not all waste. Grass grows freely along these fences, wherever there is a spot unoccupied, especially adjoining the plowed lands under good culture. Again in dry seasons sometimes immediately after mowing, the stubble and every pasture lot is dry and withered. All along these fences is a mat of green herbage which sheep and cattle will greedily eat, not excepting the poisonous ivy and even the leaves of that cattle upas, the common wild cherry, which throws up numerous succulent sprouts wherever it is cut down. Again in this part of the country we find that apple trees with a little attention, after being planted at convenient distances in the joints of this fence, grow well and bear freely, the form of this fence affording a convenient chance to plant the trees along the joints without being in the way of working the land. Where fruit trees are not planted, a growth of red cedar generally springs up, becoming in a few years valuable for various purposes of building and affording a fine protection to fields of winter wheat. Last of all when these unsightly fences are repaired, the decayed rails are still worth something. They make very good summer fires, especially for baking, as our good house-keepers can testify. So much for zig zag fence; now for posts and rails.

About the year 1816 a post and rail fence was erected on the farm; since that period coming into possession and wishing to erect a substantial stone wall in its stead, I had it moved and put up as a division fence on another portion of the farm, where it stands and promises to remain in good condition for many years to come, nearly all the original rails still remaining, a few only having been broken or decayed. This kind of fence is not quite as durable as the zig zag however. The posts were of Long Island locust—none of them having been replaced.

One more instance. In the year 1800 the house which I occupy was built, and the following year the fences around the dwelling were erected of squared locust posts 3 by 2¾ inches, yellow or pitch pine railing, white or soft pine foot boards and pickets. Last summer (1861) about half of it was taken down and a new fence built, with the exception of the pickets, which were found in so good a state that they again were nearly all worked in the fence. There had been a little repair in some portions of the old fence during the period—some three or four posts and a rail or two had given out. The other half is still standing. This fence was kept painted during the time for the most part, although some intervals of exposure intervened.

I have always supposed it practicable to fence our farms by hedging, yet all the attempts I have witnessed have failed, not however from inadaptedness of the material so much as from the want of systematic management. The Osage Orange in a country not supplied with timber, would be a good substitute for dead fences in my opinion. Hawthorn does not grow well here, the summers being too hot and dry. Honey locust might be used to good advantage. The finest hedging plant I think is American Arbor vitæ. Beautiful at all seasons, it can be managed as a hedge with great ease, and forms a wall of green; yet I have never seen a farm hedge of this material. All these substitutes for dead fences however, are attended with great expense and much watchful care in the rearing and protection required for many years before they become really fences. In the meantime the farmer has the two-fold task of protecting them by fences on one or both sides to prevent his cattle from destroying what has required years of anxious toil and care to produce. Then too it is difficult to repair serious injuries in a hedge after attaining much size, requiring years of additional care; natural growth gets the start and generally will succeed well. Its value for fencing may be estimated when it is known to resist decay in the ground for near a century, and sells in New York market for posts at the rate of forty to fifty dollars per measured cord. Red cedar of sufficient age is nearly as lasting. Mulberry is quite so, and the Catalpa is also said to be about as durable as locust. The two latter varieties are attainable at low prices, almost at any time in this vicinity. Both are easily transplanted and deserve attention.

Cold Spring Harbor, L. I. R. M. CONKLIN.

* * *

Skunk Trap.—A correspondent of the Ohio Farmer describes the following very simple but ingenious way of trapping "vermin:"—Every man may catch his own skunks. I have just discovered a new and novel trap for catching these pesky animals. I take an old flour barrel, tack my bait in the bottom, and lay it on two blocks about six or seven inches high, one of which is near the centre; the skunk goes in, steps over the fulcrum, and the barrel rights up on its end with the skunk in it. He can readily be disposed of by throwing him into the water, and then shooting him. I have taken five within a few nights. This is safe against cats and other domestic animals. Try it.

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☞ The editor of the Maine Farmer suggests the use of Hop vines for bands in binding grain, cornstalks, straw, &c. "They are strong, flexible and tough, and have the advantage of being longer than Osiers, if you wish them longer. Indeed they may be cut of any required length, and may be kept and saved after the hop has been gathered, cut into convenient lengths, and laid away until another year for the grain binding."

CHINESE SUGAR CANE—
IMPORTED SEED.

The subscriber offers for sale a small quantity of the

GENUINE SORGHUM SEED,

received from Messrs. Vilmorin & Co. of Paris, which may be relied upon as PERFECTLY PURE. Packages containing half a pound mailed to any address on receipt of

TWENTY-FIVE CENTS

in postage stamps. No order will be filled for less than half a pound.

April 24—w3tm1t. B. K. BLISS, Springfield, Mass.

AMERICAN ARBOR VITÆ.—

A large stock of well grown nursery plants, 12 to 18 inches high, $2 per 100, $15 per 1,000, $140 per 10,000; 18 to 24 inches, $3.50 per 100, $25 per 1,000; 24 to 30 inches, $5 per 100; 8 to 12 inches $10 per 1,000. Packing done in the best manner without charge.

S. T. KELSEY & CO., Great Valley Nursery,

April 17—w3tm1t. Great Valley, Cattaraugus Co., N. Y.

AGRICULTURAL SEEDS BY MAIL.—

The following reliable Seeds will be mailed to any address at the prices affixed:

	Per Ounce.	Per Half Pound.
Mangold Wurtzel, Long Red............	8 cents.	30 cents.
do. do. Yellow Globe.........	8 do.	30 do.
Carrot, Long Orange, extra deep color'd,	10 do.	40 do.
do. White Belgian....................	10 do	40 do.
Ruta Bagas, Skirving's Purple Top, ...	8 do.	30 do.
do. do. Laing's Improved..........	8 do.	30 do.
Sugar Beet, true,........................	8 do.	30 do.
Chicoree, the great substitute for coffee,	10 do.	40 do.
Onion, Large Red Wethersfield,........	10 do.	40 do.
do. Yellow Danvers,..................	15 do.	50 do.

Those who wish for larger quantities will be supplied at the lowest market rates.

Our Descriptive Catalogue of Vegetable and Flower Seeds will be mailed to any address on receipt of a three cent stamp.

April 24—w3tm1t. B. K. BLISS, Springfield, Mass.

FOR SALE.—State and County Rights for

"BRYANT'S NEW MODE OF HANGING AND RUNNING FLY WHEELS." Address the Proprietor, J. BRYANT, M. D.,

April 17—w2tm2t.* Brooklyn, N. Y.

NEW SEED POTATOES.—

Having secured the entire crop of that most excellent Potato known as the

GARNET CHILI VARIETY,

grown by HAZEN VAN NOSTRAND of Fulton County, they are now offered in large or small quantities on the most reasonable terms. By the quantity, packed in good barrels, and delivered to railroad or boat, they are furnished at the low price of $4.50 per barrel.

This variety has been successfully cultivated during three or four years past, and alongside the Prince Albert, Pink-Eye, Peach Blow, and other varieties, and has never rotted or failed, while all the other varieties have failed at the rate often of 30 to 50, and in some cases 90 per cent.

It has been pronounced by the New-York State Agricultural Society, the best of 58 varieties, exhibited together at the Fair of 1860. Although not as early as Prince Albert, it is equally as fine in quality, and grows large, is nearly round and uniform in size. It has a very white flesh, and is one of the most hardy as well as best keepers known. This crop yielded over 350 bushels per acre. All orders addressed to EMERY BROTHERS, 62 & 64 State-Street, Albany, N. Y., will be promptly attended to. April 17—w3tm1t.

BERKSHIRE PIGS FOR SALE AT
EDWARD WAIT'S,

Walden, Orange Co., N. Y.

Two litters about two months old. One Boar, one yearold.
One pair about seven months old. Will sell to suit the times.

April 24—w&m1t.

NANSEMOND SWEET POTATO PLANTS.

A superior article, as in years past, adapted to northern planting—packed to go safely long distances, at $2 per 1,000; 5,000, $9; 10,000, $15—in May and June. Our plants have given pleasing and highly satisfactory results in the north for many years—growing good crops forty-four degrees north.

Send stamps for my Circular on growing and keeping Sweet Potatoes, with the experience of growers, &c.

C. B. MURRAY,
Foster's Crossings, Warren Co.,

April 24—wtfm1t. Ohio.

DOWNING'S FRUIT AND FRUIT TREES.

Just Published and for Sale at this Office—sent by mail, post-paid, at $1.75.

Coe's Superphosphate of Lime.

To the Editors of the Boston Post—Gentlemen—The testimonials to the many valuable qualities of Coe's Superphosphate of Lime, multiply from all quarters.

Wishing that the public may be reliably informed upon this really valuable fertilizer, we send for insertion in your paper a letter from our well known citizen Francis E. Faxon, Esq. His integrity and practical farming intelligence are well known to all his acquaintances.

Boston, April 1, 1862.

Messrs. Coe & Co.:

Gentlemen—I am the owner of an "interval" farm in Conway, N. H., and by way of experiment I purchased last year, of Messrs. Breck & Son, two tons of Superphosphate, and I am so well satisfied with the effect produced, that I have purchased of the same house four tons for use the coming season. My experiment was made as follows: On the 10th of May, 1861, I broke up an acre of cold land, which had been used for a calf pasture for many years. After harrowing thoroughly I put in each hill a handful of Phosphate, mixing it slightly with the loam. From the acre I harvested eighty-four bushels of ears, all sound and filled over the ends. One row I planted without the Phosphate, the result was, stalks a foot in height, and not one ear of corn.

For Garden use I consider it the best stimulant I ever saw, the worms and bugs giving it a wide berth.

In the Fall of 1860 I sowed down six acres to grass, manuring with 625 pounds of Phosphate per acre. The result has been highly satisfactory thus far, and I think it will be a lasting and valuable fertilizer. Yours, respectfully, Francis E. Faxon.

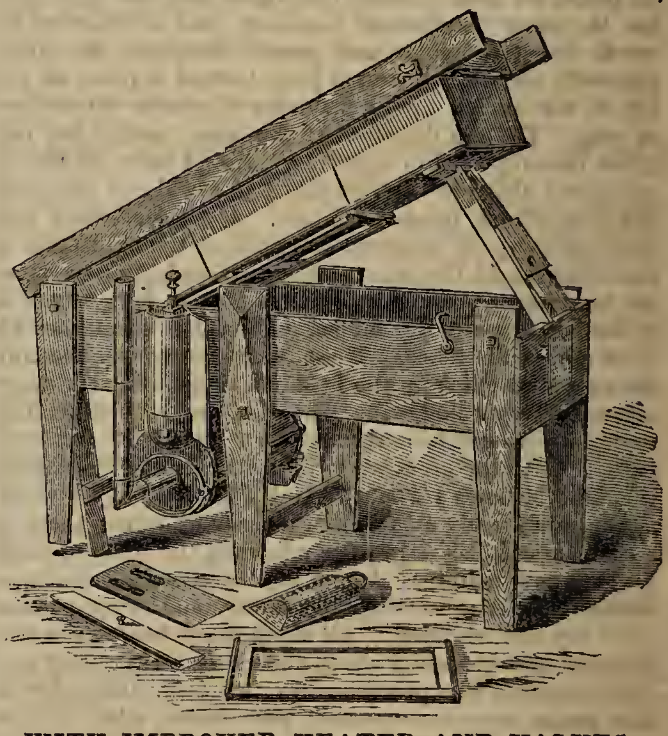
April 17—w&m1t.

COE'S SUPERPHOSPHATE OF LIME.—

Office 19 Broad-Street, Boston.

For Testimonials of the value of this article, address COE & CO. as above. April 4—w1y.

ROE'S WESTERN RESERVE
PATENT
PREMIUM VAT,



WITH IMPROVED HEATER AND VALVES.

THIS well-known CHEESE VAT was first introduced to the Dairymen more than seven years ago; **several thousand** have since been sold throughout the country—**more than one thousand** the past season; numerous and valuable improvements have been added from time to time, to embrace everything wanted in a CHEESE VAT, and we believe it now is the most **complete, simple, durable and convenient Cheese-Making Apparatus in the world.** Our long experience enables us to warrant our VAT to give entire satisfaction. By getting one of these VATS, a single Dairyman in any part of the country will have as complete an apparatus as is used in the largest dairying localities. The cut shows the back side of the VAT when opened, after using; the tube on the end of the heater is for the escape of steam; the knob at top operates the valve.

ROE'S PATENT ADJUSTABLE EXPANSION CHEESE HOOP, a very nice thing; one hoop makes three sizes, and expands to lift off the cheese.

SEND FOR CIRCULAR.

May 1—m1t. ROE & BLAIR, Madison, Lake Co., O.

50 HONOLULU NECTARINE SQUASH

SEEDS, nine cents—Giant Emperor and Truffaut's Peony Flowered Asters, nine cents—Zinia Elegans, nine cents. All the above free, for twenty-four cents. P. SUTTON,
April 10—w1tm1t. Ransom, Luzerne Co., Pa.

A NEW GOOSEBERRY AND NEW RASPBERRY

from the great West. The Gooseberry is large, smooth, prolific, of fine flavor, and free from Mildew. The Raspberry is a black cap, even larger and finer than Doolittle's Improved. Circulars sent on application. HEFFRON & BEST, Utica, N. Y.
Feb. 6—wtfm3t.

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☞ The first of April is as early as potatoes can usually be sent safe from frost, except they go directly south.

CHAUNCEY E. GOODRICH, Utica, N. Y.

REFERENCES.—From among very numerous persons who have cultivated these and others of my seedlings for the last two years, I select the following:—George Buckland, Toronto, Canada West: Geo. Bachelder, Stanstead, Canada East. H. M. Cram, Vergennes, and Albert Breese, Hubbardston, Vt. Charles H. Gleason, Holden, Wm. Bullard, Dedham, and Wm. F. Bassett, Ashfield, Mass. Horace Humphrey, Winchester Corners, Ct. Jesse Vaughn, Cheektowaga, Samuel J. Wells, Fayetteville, E. W. Howell, North Chili, O. C. Chapin, East Bloomfield, John Bowman, Baldwinsville, and Edward Merritt, Poughkeepsie, N. Y. W. W. Griscom, Woodbury, and Benj. Sheppard, Greenwich, N. J. P. B. Gray, Half Moon, P. Sutton, Pittston, and Aaron Bombaugh, Harrisburgh, Pa. Yardley Taylor, Loudon Co., Va., J. Howard McHenry, Baltimore, Md. J. C. Holmes, Lansing, and S. T. Douglas, Detroit, Mich. S. L. Manker, Pontiac, and John Moss, Robin's Nest, Ill. Feb. 13w&m.

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THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY, N. Y., JUNE, 1862. No. 6.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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The Cultivator & Country Gentleman.

HYDROPATHY ON THE FARM.

It is not an inappropriate season of the year to say a word or two with regard to IRRIGATION. It has been so often written about, as a recondite and costly process, with elaborate calculations of frightful length, and erudite citations of foreign systems, all the way from Italy to China,—that our Farmers are too much in the habit of regarding the very word as a sort of bugbear, rising on the view amidst the exhalations of submerged rice-fields, or pointing with spectral hand to plains and valleys checkered over with Egyptian conduits and intersected with Dutch canals.

Now, without being altogether disciples of the Grafenberg school, we may yet be permitted to doubt whether the true usefulness of Water is quite appreciated as an agent in maintaining and promoting either the health of men or the fertility of soils. Its efficiency in both respects, has not as yet been fully explained. That certain Springs which Nature has warmed and medicated in the inner chambers of Earth, the kind mother and nurse of us all, should possess curative properties of their own, is not so strange; nor do we wonder that rivers which have washed down the soluble wealth of many a remote hillside, to lavish it on the flats that immediately skirt their course, should render these favored spots inexhaustibly productive. But what virtue there may pertain to clear and limpid water, in itself considered, as a restorative upon the human frame, or as a fertilizer upon the land, it is perhaps not so easy to determine.

The latter question, particularly, is complicated by the conflict of authorities and of experience. Our friend, the present Minister of the United States at the Court of Nicaragua, is fully convinced that none but *soft water* will fertilize the soil, and confidently points to the fact that Nature herself draws this distinction in sending down no other kind in her vivifying rains and refreshing showers. But the equally practical writer on this subject in *Morton's Cyclopædia*, informs us that in Hampshire, England, "waters running over calcareous soils, and *hard*, or abounding in carbonate of lime, *are* used with great success." The former authority, Mr. DICKINSON, takes pains to render the water with which he irrigates, thick and turbid, in order to make it float a top-dressing of finely divided soil all over his meadows; but the English writer carefully distinguishes between the irrigation of meadows and of arable land, and while he says that on the latter "the more thick and turbid the water, the better,"—asserts, as the result of English experience, "that, for grass land, the clearer the water the better; that calcareous matter, taken up in a form *not* to render the water turbid, is almost the only beneficial admixture," and that "when the rivers are turbid from quantities of silt, or of finely divided clay and peat, they injure the grass, especially the former [silt,] but streams flowing clear and pure from the hills are of benefit, and especially from hills abounding in lime."

We are thus met at the outset—in pressing upon the farmer the importance of Irrigation—with a very difficult question to answer: "How am I to know whether the water I have, is of the right kind for the purpose?"

A German pupil of Baron LIEBIG's has lately written an authoritative exposition of the Laws of Agriculture according to the theory of that distinguished investigator, and the only one of them all which he emphasizes in italics, is this: "*There is no absolute rule in Agriculture—everything depends on the circumstances of the case.*" If all of Liebig's philosophy was based on as sure a foundation and backed by as abundant testimony, as this very sensible conclusion is, he would have had fewer critics buzzing about his ears, during the past twenty years.

And our only reply to the interrogatory supposed, is the one which it is so easy to give, and often so difficult to act upon, namely, that each must judge for himself according to the circumstances in which he is situated. But with regard to Irrigation it seems tolerably safe to decide in the affirmative, unless there are unmistakable indications to the contrary—we should be inclined to throw the burden of evidence, as a general rule, upon the negative of the question.

Whether it may be expedient to irrigate with muddy water, or not, there can be no doubt that any material of a fertilizing character can be applied to the land by the agency of water more effective than in any other way. The soil, which is capable of filtering the water of our springs to such crystal purity, appears equally well calculated to absorb, or rather attract, from liquid manures every particle of the fertilizing ingredients that may be floating in them, and the dissolution, partial or complete, of these ingredients appears to adapt them exactly to the requirements of the plant. And as water carriage, as a general rule, is cheaper than land carriage, it would not be at all surprising if the means should ultimately be developed of carrying our manures over the farm in liquid form, to a much greater extent than has thus far seemed practicable.

It is our belief, to go back to Irrigation pure and simple, that in no other country are there greater reasons or more abundant facilities for its adoption, than throughout many parts of the United States—the former on account of our climate, and the latter because of the frequency of streams which might be employed for the purpose, and because the conformation of the land is so often just what is required to accomplish irrigation at a small cost.

As to the *climate* of the United States, we are subject to extremes of heat and prolonged drouths, which render our country, as compared with Great Britain, as a general rule, less productive of grasses, and much more in need of artificial supplies of moisture. In fact, irrigation in Great Britain is so particularly well attended to by the skies, that comparatively little has been done by man in this direction. It is in such countries as "sunny Italy," and southern Spain, and in China, in all of which there are more points of resemblance to our climate, that irrigation has been found the most serviceable, and where it is now most extensively practiced.

Few people are aware how little the *amount* of rain-fall in the year, has to do with the "moisture" of a climate. As a general rule it may almost be asserted that irrigation is the most necessary *where the rain-fall is greatest.* Thus we find that in Great Britain the amount of rain precipitated in the year varies from 20 and 22 inches in the eastern and middle counties to 30 in the southern and 40 in the western—with a calculated average for the British Islands of 32 inches. At Florence in Italy it is 41½ inches. In the United States, the average, varying with local influences *increases as we go southward,** from about 40 inches in New-England and in the North Western States, to 42 in what are now called the "border States," 45 still farther south, and 63 in the latitude of Mobile.

Thus the average rain fall in the United States is probably at least one-third greater than in the United Kingdom, and in many cases fully double. But our rains come in large quantities at once, instead of slowly, and consequently run off more quickly; moreover, during the months in which we have the most rain, namely, August and September, there is a much more rapid evaporation going on, so that the rain which falls is proportionately less available for the purposes of vegetation. Taking the seasons, each by itself, possibly nine persons out of ten would assert that the greatest precipitation occurs in Spring, and the next greatest in Winter, whereas the figures show that the largest amount of moisture falls in Autumn; Summer stands next to Autumn, and Spring is the third, and Winter the fourth and last, on the list. And in this country we have only from fifty to sixty rainy days in the year, against about one hundred and forty in round numbers in Great Britain.

The conclusion to be derived from these considerations is—that if we, who receive the donations of the clouds so much more rarely, although in a quantity absolutely greater, can devise a system by which we shall make up for their rarity by applying moisture to the land for ourselves as it may be needed, we shall go much farther in combining the advantages of a warm sun with those of plentiful moisture, than is possible in a country where the former can never be secured by ingenuity nor bought by money, and where the latter can be increased, but never diminished, by the appliances of art. Heat and moisture are jointly essential to the greatest luxuriance of vegetable growth—neither can accomplish much without the co-operation of the other.

In the frequency with which our farmers can command springs or streams upon a higher level than many of the slopes upon their farms, they possess a great natural advantage for purposes of irrigation.

There are half-a-dozen instances in the employment of Irrigation for farm purposes which we have personally examined, which among others seem to be here especially worthy of notice—four in Great Britain and the other two in this country. Of all of them we have already written at some length in the columns of the COUNTRY GENTLEMAN, so that our allusions now shall be very brief, and merely to recall in a single article what has before been said upon this important topic at various intervals.

The examples to which we refer are those upon the estates of Lord HATHERTON, THOMAS HORSFALL, Esq., and Mr. MECHI in England, upon the noted Edinboro' meadows in Scotland, and on the farms of Mr. DICKINSON in Steuben county, and Mr. L. D. CLIFT, in Putnam county, in this State. The first-mentioned, that of Lord Hatherton, at Teddesley in Staffordshire, is one of considerable expense, securing however drainage as well as irrigation, together with a large water-power, all from the same outlay. The farm concerned, which, at the time of our visit, and for a long period anteriorly had been under the superintendence of Mr. BRIGHT, a very judicious and skillful manager, embraced over thirteen hundred acres, so situated that the drainage outflow from over five hundred acres which was originally a sort of elevated swamp, can be collected in a reservoir, carried through a covered conduit half a mile to the farmstead, where it turns a mill-wheel of 38 feet diameter, and thence passes through a tunnelled channel on to a piece of meadow of 115 acres below, over which it is spread at pleasure by means of permanent channels, and which it has converted from an area comparatively worthless into a never-failing source of grass and hay whatever may be the character of the season. We did not inquire into the details of pecuniary cost and return, but soon after these improvements were first completed, the statement was published that the total cost of underdraining 467 acres, of arranging for the mill, and of the irrigation of eighty-nine acres, had been between thirteen and fourteen thousand dollars, but that the annual rental of the estate was thereby increased over $5,000, so that the handsome interest of thirty-seven per cent. was the clear result of the outlay.

At Mr. HORSFALL'S in Yorkshire, the irrigation comes from a little brook into which the sewage of the village of Burley flows, and is simply performed by being admitted at the highest point, a gentle knoll in the the meadow of 14 acres, whence furrows having a very gradual descent, carry it over the whole, the water when turned on trickling out from these channels through the grass. It is allowed to run through the winter until March, when the meadow is grazed until May, and then another irrigation ensues to give a start to the hay crop, and after mowing a third flowing takes place. The land is all drained, the lines of pipe-tile running eight yards apart, and from three to four feet deep, the latter depth being found preferable, and having been employed in the drains most recently put down. If there is any surplus in the supply of liquid manure, which is saved at the stables in reservoirs by itself, beyond what is wanted for other purposes, it is taken to a little excavation upon the knoll referred to above, and there mingled with the water used for the irrigation of the meadow.

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* Of course this statement is only approximatively correct. The zones of equal rain-fall, instead of running east and west, appear to be more nearly N. E. and S. W., so that the belt of 45 inches precipitation, for example, includes part of the shore line of New England and thence runs southwesterly into eastern Virginia and North Carolina, where it strikes inlan dacross Tennessee and Arkansas. But at almost every point there are so many local peculiarities affecting the case, that even such a statement as this is only true in the broadest and most general sense

Our readers are already familiar with the systems pursued at Tiptree Hall and on the Craigentinney meadows. Mr. Mechi was so highly convinced of the increased value of manures when conveyed upon the land in liquid form, that he went to the expense of building cisterns, putting down pipes, and erecting a steam engine to force the dissolved fertilizers, or often water scarcely burdened with fertilizers of any kind, through subterranean channels over his whole farm. The sewage of the city of Edinburgh diluted with the Foul Burn water, carried by channels constructed for the purpose upon the flats overshadowed by "Arthur's Seat," produces such crops of grass, that the milkmen of that canny town, on the 11th of April last, bid off the cutting of it for the season of 1862 at prices varying from £20 to £40 sterling per imperial acre!

As to the system of Irrigation pursued by Mr. Dickinson on his farm at Hornby, a full account may be found in the Cultivator for 1857, pp. 148, 283. It is quite simple, not costly, and well worth the examination of those interested in the subject. As a mere outline of the method adopted, we may say that the sloping meadow to be irrigated has a furrow carried along its highest part into which the water will flow from the spring or reservoir to be employed for the purpose. The main point requiring care is to lay down this furrow by means of a level, so as to secure a very gentle and regular descent. Other similar furrows, either branching from this, or made by extending this in curves and parallels, to reach as large a part as possible of the surface of the field—are plowed out according to the conformation of the land, and require comparatively little labor with the spade or shovel to secure all the finish that is necessary. In practice the water is admitted into these furrows so as to fill them, and trickle down from their sides over the intermediate spaces. A little exercise of "common sense" and ingenuity, with a clear idea of the object in view, will enable any one to undertake the Irrigation of his meadows according to the requirements of the case, much more easily than directions can be laid down on paper suitable for all localities.

The chief object of this article is to call attention to the beneficial results of Irrigation, and the ease with which they are often to be obtained. There is scarcely any other subject more worthy of discussion, and as a considerable interval has now elapsed since much has been said about it in our columns, we invite the aid of our correspondents to show whether the practice of Irrigation is extending in this and other States, and whether those who may have tried it during the past five years, find its returns upon the degree of labor bestowed, as satisfactory and as remunerative as has been claimed, so far as we are aware, by all who have previously experimented in "Hydropathy on the Farm."

SHORT-HORNS IN ENGLAND.

In the Country Gentleman of March 27th, we noticed an important shipment of Short-Horns from this country to Great Britain, and in our last number a paragraph was quoted from one of our Dublin exchanges, referring to the arrival there of that part of the shipment sent out by Thomas Richardson, Esq.

The remainder of the shipment,—sent over by Samuel Thorne, Esq.—consisted of four animals, as follows:—

Name.	Calved.	Sire.	Dam.
Duke of Geneva,	Feb. 16, 1860..	2d Grand Duke,........	Duchess 71.
Lord Oxford,....	Sept. 16, 1857,.	Duke of Gloster, ...	Oxford 13.
2d Lord Oxford,.	Nov. 8, 1861,..	4th Duke of Thorndale,	do.
Oxford,...... ...	March 26, 1861,	2d Grand Duke,........	Maid of Oxford.

The first bull mentioned on this list, the "Duke of Geneva," was bred by James O. Sheldon, Esq., from whom he was purchased some time ago by Mr. Thorne. He was sold to the Hon. Colonel Pennant, M. P., Penrhyn Castle, Bangor, for 600 guineas, (say $3,000.) He is own brother to 2d Duke of Thorndale, sent over last year, and sold at 400 guineas to Messrs. Howard & Robinson.

The second bull, "Lord Oxford," was noticed in high terms in this paper of Feb. 21, 1861, at which time he was in the possession of Hon. Francis M. Rotch of Otsego. He was bred by Mr. Thorne, and sold to the Duke of Devonshire for 400 guineas (say $2,000.)

"2d Lord Oxford," half-brother of the preceding, and sired by one of the bulls sold in England last year, went to Mr. Atherton of Speke, near Liverpool, for 250 guineas, (say $1,250,) which is not a bad price for a five months' calf.

"Oxford," who "went cheap," according the London *Agricultural Gazette*, owing to being out of condition, was purchased by Mr. Slye of Lancaster, for 150 guineas, ($750.)

The journal just quoted, which is one of the leading agricultural authorities in England, speaks of these sales as affording "another marvellous illustration of the value of good breeding in the Short-Horn world," and of the high prices obtained, as being "sufficiently illustrative of the enormous value of animals of the Duchess and Oxford tribes of Short-Horns," to "deserve a record in the history of the breed."

As the statement has appeared in one of our contemporaries that Mr. Thorne is to be an exhibitor at the grand show which takes place at Battersea Park, London, this summer, under the joint auspices of the Royal Ag. Society of England, and the Highland and Ag. Society of Scotland,—we may state that it was his partial intention to have placed one or more of the above animals in competition on that occasion; but the uncertainty of their attaining proper condition to be exhibited with a fair prospect of success, so soon after a long and trying sea voyage, together with the tempting prices offered for them by ready purchasers immediately upon their arrival, led him to abandon a project, which, under other circumstances, it would have been most creditable both to him and to the country to have adopted. We are glad to be able to state however, that American Short-Horns *are likely* to be among the winners at that time—"2d Duke of Airdrie," sent over last autumn by R. A. Alexander, Esq., of Kentucky, having been in course of preparation during the winter and spring, and being now, as we are assured by competent parties, in tip-top order to win. The trial, if fair play is given, will be an interesting one.

—We cannot help repeating the remark in substance, with which our notice of the Thorndale shipment to England last year was accompanied, that these animals are to be spared with great regret from the Short-Horn stock of the country. It would be no matter of surprise, to find the descendants of the very ones which are now sold in England owing to the temporary dullness in the demand for improved stock of all kinds in this country, re-imported to the United States, at still higher prices, in future years by other parties.

AGRICULTURAL STATISTICS.

In advocating the collection of Agricultural Statistics, we have frequently urged that the figures presented by the United States census returns once in ten years, are very far,—in the opinion of those best qualified to judge—very far indeed, from giving anything like a correct picture of our agricultural resources and development.

At the risk of wearying our readers by too frequent recurrence to this subject, we have before us an illustration of the foregoing remark, which we cannot pass by unnoticed. The Report of the Massachusetts State Board of Agriculture for last year, contains the statistics of the State as given in the U. S. Census returns for 1860, together with a comparison between them, and the returns of the State assessors. To this chapter Mr. Secretary **Flint** calls our special attention, and we find it fully bears out the statement with which we began. For example—and to carry out the comparison a little farther than is done in the article before us, we note that the U. S. Census reports the agricultural area of the State as follows:

Total Extent of "Improved Land," in acres	2,213.315
do. do. "Unimproved Land," do.	1,192.296
	3,405,611

But the State Assessment returns, taken about the same time and for the same year, give us quite a different result, as below:—

Acres of Land annually tilled		265,576
do. do. Orchards, including all kinds of fruit		41,812
do. Upland Meadow	550,183	
do. Lowland Fresh Meadow	156,359	
		706.542
do. Salt Meadows		38,543
do. Pasture Land		1,344,914
		2,397,387
do. Woodland not enclosed as pasture		976,071
do. Unimproved land		767,019
		4,140,477

This appears like quite a different territory from that referred to in the census returns—there being an area of 184,000 acres of improved land, and over 550,000 of unimproved, which "Uncle Sam" does not condescend to notice at all. When we come to the domestic animals of the farm, we find quite as striking omissions, with the single exception of swine, the number of which is given in the census as being greater than reported by the assessors:

Total number of Horses—State assessors	90.712
do. do. Census returns	47,679
Discrepancy	43,033
Total number of Cows—State assessors	160.982
do do. Census returns	134.475
Discrepancy	26,507
Total number of Sheep—State assessors	115.671
do. do. Census returns	113,279
Discrepancy	2,392

Take the hay crop as another instance in point:

Hay cut in tons—State assessors	702,285
do. Census returns	668,628
Discrepancy	33,657

The article before us calculates that the discrepancies above noted alone make a difference of nearly *five millions of dollars* in the valuation of the State.

The value of the farms themselves, as well as of the live stock upon them, is often greatly underrated, to judge from individual instances referred to, although there is nothing given which proves the general average for the farming lands of the whole State, to be far out of the way. This is a fraction less than thirty-six dollars and fifty cents per acre. With the facts which *are* fully proven, before us, however, we can entirely coincide in the reflection that "these returns, while they are of great value relatively, are yet so far from the actual truth, as to be nearly valueless, except for purposes of comparison, and it is to be regretted that some more perfect plan has not been adopted in these investigations. But so long as the work is entrusted to political favorites, irrespective of other qualifications, rather than to persons specially fitted for such labor, we may well despair of reaching even an approximation to the truth." * * "The average annual produce of butter per cow, is a little less than seven lbs.; of cheese, about five pounds. And yet these items, and such as these, are to be laid before our own people, before the people of other states, and before the world, *as the results of official inquiries into the present condition of the Agriculture of Massachusetts!*"

Can we have fuller evidence than is afforded by such developments as these, of the good that might be accomplished by a National Bureau of Agriculture and Statistics, which should select as its agents and enumerators men qualified for the task, who would undertake it intelligently and carry it out honestly? With such errors in the returns of a single State, by no means one of the largest in the Union, it is easy to conceive how very wide of the mark the grand aggregates of the country are very likely to be. As is intimated above, the only use of our census returns, as they are at present taken, is derived from the supposition that the *average* of mistakes and incapacity will be about equal in different localities and at different periods, and that consequently the figures we have, may fairly serve as the basis of general comparisons. But they should not go before those nations of the world from whom we are deriving, and hope to derive, an immigration of incalculable value in our national growth, as justly representing the capacities and the culture of our country. Either through State or Federal enactments, or both, working in co-operation with each other, we trust that we may eventually get more nearly at the truth.

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[For the Country Gentleman and Cultivator.

WIRING FENCE-STAKES.

A writer in the Country Gentleman, gives his plan for boring fence caps. I think I can tell him of a better way to fasten the stakes than to make wooden caps. In the first place, they are liable to split—2ndly, no two corners require the same length of cap—3rdly, you have to bring all the stakes to a certain size.

Seven years ago I was making a cedar fence with stakes and rider. After setting the stakes without reference to size, and having the fence ready for the top pole, I bought some wire of the size of telegraph wire and annealed it, so that it was quite flexible. I got an iron made (a nail rod is large enough to make it,) six inches long with a hole in each end that readily receives the wire, with one end made at right angles. With this I loop or coil the end around the main wire something as telegraph wires are fastened. With one hand hold of the small loop, and the other hold of the main wire, while an attendant brings the stakes to the desired position, you can draw the wire to such tension as you desire; then give the wire a short turn in the loop; then with file cut the wire, and loop the end back on the main strand. The cost per corner will not exceed one and one-half cents. If the frost raises the stakes, take a beetle, while the ground is soft, and drive them down.

My staking to which I refer, stands as well to-day as when first made. **Hiram Walker.** *Mexico, N. Y.*

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☞ The Winnebago Co. (Ill.) Ag. Society has its next Fair at Rockford, Sept. 16—19. President, Dr. H. P. **Lane**; Secretary, H. P. Kimball.

INQUIRIES ABOUT BARNS.

Messrs. L. Tucker & Son—Being about to build a barn on a plan derived from a design on page 130 of your Annual Register for 1862, I take the liberty of asking several questions on points connected with it, answers to which, if convenient, would confer a favor.

1. Would not a *separate* manure shed be preferable? The space for it in your designs would be otherwise useful. (1.)

2. Are there any objections to the use of rain water from cisterns for horses and cattle? (2.)

3. Is the cistern described on page 139 of same article preferable to a circular one in a corner of the basement?

4. Would either be liable to freezing, and which least so?

5. What access is there to the outside one for cleaning, etc.? (3.)

6. The dimensions of my plan being, length 42 feet, depth 35, height 18, what style of roof would best combine cheapness, utility and looks? (4.)

7. Is 14 feet a good width for the threshing floor, the bays and the stables? (5.) G.

Baltimore Co., Md., April 29.

(1.) The object in placing the shed and space for manure in the basement, is economy. The basement of a barn costs only the excavation and wall—a separate building requires the additional expense of roof and some additional wall. The advantages of comprising all the barn accommodations within a single building are the diminished cost of exterior walls and compactness of accommodation. Hence, if more room is needed, a larger building should be erected. Otherwise, there is no serious objection to a separate building for manure, except the labor of wheeling to it.

(2.) Rain water answers well for cattle, and for horses except a few who are so dainty as not to drink it. Usage however will cause nearly all animals to like it, if it comes from clean roofs, and is kept in frequently cleaned cisterns. It is purer than spring water, so far as relates to mineral ingredients; but brings down some foreign and vegetable matter, which render it less palatable.

(3.) A circular cistern would be more economical of exterior wall material, but would be more difficult to cover properly so as to be secure from any danger of caving in. Both being covered with a foot of earth, they could not freeze. A curb of stone, two feet square, forming what is called a "man-hole," properly covered, would admit cleaning. The best curb is made of chisseled flagging, set on edge, a foot or more high, and reaching the surface of the ground; and a flag-stone fitting the inside and resting on shoulders, at the lower part, and another lying on the top, the intervening space filled with chaff or straw, secures the cistern most completely from the frost. Through this curb, the water pipe may enter, or the pump tube be placed for withdrawing the contents.

(4.) The roofs figured in the Register would be suitable. The truncated gable is a matter of taste, which any one may adopt or reject, as best suits him.

(5.) We see no objection to these dimensions.

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[For the Country Gentleman and Cultivator.]

SEASONABLE SUGGESTIONS.

Now, farmers, is the time to look after your mowing machines, horse rakes, hand rakes, forks, &c. See that they are all in proper order, for seed time has come and harvest will soon be here. Take your mowing machines into your work shops the first leisure or rainy day—take the caps of the boxes, and clean all the gum from the bearings that may have collected there. If any has adhered to any part of the machine, take an old knife and scrape it off. Be careful however lest you scrape off the paint from the wood work. Examine all the bolts and nuts, and see that they are in perfect order. If you find any broken, take them out and have them mended at once, for you cannot afford to spend time when mowing has commenced. If your machine has been used a year or two, perhaps it would not be amiss to give it a coat of paint. Take your cutter bar and knives, and see that the knives are all fast and the bar straight, and grind or file your knives sharp. I think grinding is the best if you have a thin stone to grind them on. By putting your machine in good order before haying commences, you are ready to commence haying one or two days before your neighbor—who leaves his machine to fix until the day he wants to commence mowing.

To those readers of the Country Gentleman and Cultivator, who have never used a mowing machine, I would suggest that if your land is smooth enough, buy a mowing machine. You will find it a great saving of labor; you can now buy good machines cheap compared with the prices of a few years ago. Good machines are advertised in this paper.

Be sure and have a good horse-rake. Next to the mowing machine in point of labor-saving, is the horse-rake. See that the teeth in your rake are all sound. If any are broken, slip in a new one. Hard maple makes the best teeth for horse-rakes. It wears smooth and is a good and stiff wood. There are a great many kinds of horse rakes, but I have never seen any that I liked better than the revolving rake. It rakes clean and is less liable to get out of order than some of the other kinds.

Clean out your barns and sheds. Barns and sheds in which you intend to mow your grain and hay, should be thoroughly cleaned of all the hay seed and refuse stuff that will collect about and in them during the winter. By doing this a week or two previous to filling your barns, you give the rats and mice notice to quit, as it leaves no harboring place for them. These and many other things that may be put in proper shape before harvesting commences, will save the trouble of doing it at a time when you have the least time to spare to do it.

Rosendale, May, 1862. S. P. KEATOR.

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[For the Country Gentleman and Cultivator.]

TOBACCO AFTER IT IS DRIED.

A method of curing tobacco after it is dried, generally practiced by farmers in Germany, consists in forming a round stack of the same, turning the points or the thin part of the leaves or blades as much as possible outside, and the thick or stemmy part to the inside of the stack. The idea is to warm the tobacco by its own yet containing moisture. Killing or rather curing the greenness of the veins in the blades, and by a certain sweat to improve the flavor and appearance of the article. When warm enough in the middle or the warmest part of the stack, to bear a hand inside without discomfort of heat, it should be taken apart and that part of the stack not warmed up to the point of sweat, be put in the middle for a like cure. Care must be taken not to burn it black, or like ash-burned manure, to which purpose it should be frequently examined. When the above point of curing is attained, it may be laid out thinly to cool off and dry, after which it can be put into whatever shape for market, in bales, casks, hogsheads. By the above process the farmers in Germany manage to cure tobacco, and sell when very successful, the same, at prices often equalling the best sort raised in this country. The stack named must be in doors, on a good plank floor, and accessible to very little air, while in stack. John F. Hillman.

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Rare Birds.—The admirers of rare and beautiful birds, are referred to the advertisement of Mr. Giles of Wood stock, Ct., in another page of this paper.

[For the Country Gentleman and Cultivator.]

RAISING LAMBS FOR BUTCHERS---No. 2.

After the ewes are well rested, and used to grass so that there is no danger of over-eating, they may gradually be put on better pasture. At this time an important point is to be aimed at, and kept steadily in view, viz., not to hurry your ewes too fast in the fall, so that the thrift cannot be kept up in the winter, but aim at a constant gain in condition, changing from worse to better, and not from better to worse. Of course if your ewes are good milkers, as they begin to spring bag they will begin to get thin; but this thinness is perfectly natural, and does not interfere with the ewes being in good heart and very thrifty. About the 1st of Oct., I should say,—others, Nov. 1st,—the ram should be turned in.

I have now to write on a delicate matter, but I shall write what I know to be so, and reserve the proof for the future, if it becomes necessary to produce it. In selecting your stock ram then, don't be too pinching, but buy a good one, as it will be money well laid out, and that you will never regret; and by all means buy a South-Down. As I have watched this matter closely for fourteen years, I can say with confidence that no other breed is better or as good. But it does not follow that you need buy of me. There are many good South-Down flocks. I would be glad if there were ten times as many. I might mention Mr. Thorne's of New-York State, Thomas Buffum of Newport, R. I., Mr. John Worth, Westchester, Chester Co., Pa., and very many others; but my readers will notice their advertisements.

When I first commenced with South-Downs, many of our old fashioned farmers would not pay ten dollars for a ram lamb. Since seeing the great advantage, these same farmers have willingly paid $25 for ram lambs, only keeping from 20 to 50 ewes, and will any day tell you that they would not be without a South-Down ram for fifty dollars; but I have said, and say now, that from $15 to $25 is enough for a farmer to pay for a ram lamb just to raise butcher's lambs. Some contend that a Leicester, Cotswold or other long-wool, is as good, but a host of witnesses say they are not. A few years ago many of the Leicesters were scattered in this section, but after a fair trial, the South-Down proved so much better, that I do not know of a single Leicester left. Some of our farmers used both in one season, dividing the ewes equally. The result was that the South-Down cross was fat and sold clean before a single Leicester cross was fit for market. The best of New-York butchers buy lambs in this section; they all say use by all means a full blood South-Down ram. I may here stop to say that all black-faced sheep are not South-Downs, and that the improved South-Down is much better than the common.

Every thing working as it should, by the 1st of March your lambs will commence dropping. I should therefore commence about Feb. 1st, to give the ewes some grain, and gradually increase to half a pint apiece by March 1st—then by April 1st have it increased to one pint of cornmeal or one and a half pints oats. If the ground should be much bare, so that the ewes can get to the ground, they will not need roots before lambing, but if confined to yards on clover hay and cornstalks, I should give about one pound turnips apiece per day, increasing to ten pounds when lambs are four weeks old; but if the ewes can run through April on good sod intended for plowing, they will not need so many roots. Many of our best farmers never feed any roots, but they keep no more sheep than they can keep well; yet it is at this point that roots are of great service, as they help to keep the sheep off the grass intended for pasture until it gets well started, and that almost insures good pasture through the season.

When the lambs are three or four weeks old, they can be learned to eat cornmeal by putting a little in the mouth, mixed with a little salt. After learning a few to eat out of the hand, partition off a pen under shelter by themselves, putting a bottom and top railing across, then nailing pickets on just wide enough to exclude the ewes, and put a small trough within, placing in it some sweet cornmeal, *ground coarse*, and a little salt at first sprinkled on. Your lambs will soon find it out, and if you please to take time, you will find it an advantage to cut some turnips or potatoes up fine for them.

By now giving your ewes plenty to eat, and nursing your lambs, they should be fit for market in June, and the ewes in September worth $1 more than cost, which, with lambs and wool, should pay full $6.50 or $7 per head for ewes wintered, especially if you raise many twins.

Holmdel, N. J. J. C. TAYLOR.

EARLY TRAINING OF COLTS.

Early training on a judicious system is acknowledged to produce the best results with the young. J. F. French of North Hampton, gives in the New-England Farmer, a communication on this subject, from which we abstract the following paragraph:

"I have two colts, one eight months old, and the other one year and eight months. They are both accustomed to the harness. The oldest I have frequently used in the sleigh. On one occasion this winter, when sleighing was good, it has taken me, together with my little son, to Portsmouth and back, a distance of nine miles each way, with no inconvenience or injury whatever. The colt is large of its age, in good condition as to its flesh, and high spirited; and I required it to walk at least two-thirds of the distance each way. It was well fed in the city, taken through streets where it could hear various sounds, and witness all sorts of objects—still it was not suffered to tire, or scarcely to sweat at all, and to every appearance was as lively and bright when I reached home as when I started. To have forced it beyond its strength that distance, or half the distance, would have been injurious—but careful training is always beneficial, and we rarely begin too young with anything."

Lambert Maynard, owner of "Trotting Childers," who has had much experience in raising and training colts, told Mr. F. that "his colts are all broken to the harness before they are a year old, or as he more properly expressed it, educated. He rarely, if ever, uses a whip. As to its injuring them to use them so young, he remarked that he never exercised them so hard as they exercise themselves when alone."

The editor of the Farmer adds: "No suggestion with regard to colts can be more judicious. The highest spirited colt we ever saw we broke in accordance with the suggestions given by Mr. French. We began by putting on the bridle only, and continued through an entire month to add various parts of the harness, until he was perfectly accustomed to every part of it. He was allowed to stand with the harness on from morning until noon, when it was taken off, the colt watered and fed, and after dinner a part or the whole harness put on again. At the end of this time we put him to a light wagon, alone, and drove him a mile, and had no trouble with him afterward."

[For the Country Gentleman and Cultivator.]

SAWDUST AS LITTER FOR STABLES.

Every person who has had any experience in milking in stables, knows how difficult it is to keep the milk free from any foreign matter, which does not add much to its flavor. I have practiced several years, fall and spring, while cows were in milk, to litter my stable with sawdust, by applying at night one bushel to eight cows. I accomplish a triple object by it. It keeps the stable clean; it keeps the cows cleaner; and last, not least, it adds to the manure pile by absorbing the urine of the animals. Let the doubting try it. HIRAM WALKER. *Mexico, N. Y.*

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Who is the most unpopular officer with some of the ladies?—General Housework.

[For the Country Gentleman and Cultivator.]

HOW TO SHEAR SHEEP.

Having seen an article on shearing sheep in your paper, which seemed to me was unworkmanlike and behind the times, and hoping that some may be benefitted by a few directions that will be of great value to the beginner, if not to an old hand; and even he, if induced to follow, may give up his tying and the waggon boxes.

Any ordinary floor that the farmer has, where he can have his sheep handy, will answer the purpose. If one man is to shear alone, take some strong material, (gunny bags ripped open are as good as anything,) so that they will make a piece say 6 by 8 feet, or what is better 8 by 10; spread some short straw or any litter that is not too short on the floor, and tack your cloth over it, using common lath or any thin strips to nail through—making the straw as even as you can. If there is to be more than one shearer, it is better to have one bed for each man, but where room is scarce, it will do to have them together. At the end of the day you will find that this will pay. When this is done, and your place swept out, you are ready for the sheep. See that it is clean of all straw and dirt at the door of the pen; lay the sheep down on its right side, rest on your left knee being at the back of the sheep; put your right foot over the sheep, carrying his left fore leg well forward, and with your left hand on his left hind leg pressed well back, you will have your sheep ready for operation. Begin on the upper side of his stomach, and shear lengthwise of the sheep; shear the brisket and the inside of the hind legs—be careful to cut off all of the small locks—(if they are left on they look very bad.) When you have the stomach sheared then you stand astride of the sheep, and with your right hand raise the head a little ways from the bed, and shear with your left hand as far as the back of the neck. Here a beginner may use his right hand occasionally—be careful not to go beyond the back bone.

As you shear, raise the sheep up gradually so that by the time you are at the shoulder you will have the sheep sitting on his rump—then you will be on your right knee with the sheep's head over your left leg and under your arm—shear well down in this position until you have to reach after the wool. Now let the sheep come down gradually, until by the time you are at the hind leg, he will lay flat—then you will be astride of him on your knees, with your right foot over his neck, which will keep him from flouncing. When this side is done, proceed with the other in the same way, but using the right hand—(you will perceive that the fleece is at his back all the time.) If you prefer using your right hand all the time, then lay the sheep on the other side to begin, or some like that way the best where they use the left hand. If the right hand is used all the time, the work will not look as well and evenly.

The way to hold the shears to cut a smooth and even cut, is to grasp the shears partly on the blade, and bring them partly shut, and run them in the wool, having previously drawn the skin smooth where it is inclined to wrinkle—pressing against the sheep—shut the shears but a little way with a draw back at the same time, and if done rightly, it will leave the sheep in handsome ridges of ¾ to 1 inch wide—that will be so close to the skin that it will often sunburn on long wool sheep with the edges about one-quarter of an inch long. Any one who has seen sheep shorn in this way, will gladly give up the old way which leaves some of it nearly an inch long, and with an appearance as if it had been gnawed off, which makes your flock of sheep look badly for a long time.

The tendency to cut the sheep is greatly lessened when shorn in this way. I have shorn a great many in a day, that did not have even a pinch on them. To cut one is the exception, not the rule.

I have written this in hopes that Young Farmer may induce his neighbors to adopt this way, and for any other shearers who may see this. I have seen men at forty give up the Young Farmer's way and learn this method.

April 14th, 1862. ISAAC S. HALLOCK.

[For the Country Gentleman and Cultivator.]

TEACHING CALVES TO DRINK.

Messrs. Editors—In the Co. Gent. of April 24th, A. Moss gave us a very good article on the treatment of cows and calves, but I must beg leave to differ from him with regard to teaching calves to drink. He says that he "backs them up in one corner of the yard or stable, puts their neck between his knees, puts his finger in their mouths, then inserts their nose in the pail, and in this way they soon learn to help themselves." Two years ago I should probably have swallowed the whole of this as "law and gospel," but my experience last spring taught me better doctrine. Having two calves that I wished to separate from the cows, I shut them up in the stable one night after they had sucked, and the next morning I milked in a common wooden pail, and set it before one of them, but it was "no go;" neither of them would eat. At night I milked again and placed it before them, when they drank it in double quick time. I know farmers who regularly practice this mode of treating their calves, and with success. You can add meal to it, and they will eat it as readily as they do the milk. Brother farmers try it, and report progress. F. A. Whitbeck. *Yaphank, L. I.*

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[For the Country Gentleman and Cultivator.]

Coarse Flour and Meal for Raising Calves.

It requires no labored argument to convince any farmer at the present day, that it is better for the cow and calf both, that the calf should be brought up separate from the dam; as the teasing and worry of the calf is injurious to her, besides keeping her constantly excited. As it is not good economy to rear them on new milk, it becomes necessary to substitute some other food to mix with the skimmed milk or whey, to make up for the loss of the butter or cheese in the food, and not produce a loose state of the bowels. I have tried scalding corn-meal and corn and rye together; then I have made it into a pudding, as you would for table use—giving them a portion in each meal; but always found more or less difficulty in making them eat it, and when they did, its effect was too loose a state of bowels. For several years I have used a coarse flour, which I could buy at the same price of corn-meal, and use it uncooked. It readily mixes with the milk or whey—does not settle to the bottom like meal; they eat it readily, and they thrive on this mixture as on new milk. I practice feeding calves in this way till fall feed is good, and have no more trouble to winter them than I do my cows. I keep them in the same stable with my cows; give them the same chance, with the addition of one quart of oat-meal each per day, or its equivalent, and when grass comes they thrive at once, without waiting half the season to recruit. Hiram Walker. *Mexico, N. Y.*

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[For the Country Gentleman and Cultivator.]

CARE OF HORSES.

I have found one table spoonful of air-slacked lime, each alternate day, often cure a horse with a heavy cough from a cold. Many horses, if blanketed in the stable, will take a cold every time they get a dash of rain in the winter, when if not blanketed in the stable, they will be entirely free. The blanket should be used when standing out, and if the horse is extra heated coming in, till the blood has time to get to its usual heat. This I have practiced for about twenty years, and have lost no horses.

JERSEY.

* * *

☞ The Ashtabula Co. (Ohio) Ag. Society has appointed its next exhibition at Jefferson, Sept. 24—26. President, Calvin Dodge; Secretary, W. H. Burgess.

[For the Country Gentleman and Cultivator.]

How to Improve a Badly Run Farm.

Messrs. Editors—Having in a former article advised those with limited means, to buy farms that were more or less run down, and stated that they would have to adopt some course of improvement, by which the land may be brought up and made productive, I will now proceed to point out the course that it will be best for them to pursue.

The first and most important point to be considered and attended too, is a general change of crops. Most farms that are run down, have been under a long course of cropping with one or more of the different small grains, such as wheat, rye, barley or oats—one of these grains generally being made a leading crop; in wheat sections, it is wheat, in other sections oats. And although rye and barley are raised to some extent, yet a large portion of badly run land has been mainly cropped with wheat or oats; while these crops are calculated to have as bad effect on land, and to give it a poor worn-out appearance as quick as perhaps any other crops; though in reality it may not be so very badly run down for other crops, besides wheat and oats. Again, such land is generally not plowed more than four or five inches deep; consequently, though the land may sooner appear to be worn out, yet in reality it is only badly run to that depth. Hence a change of crops, and deep and thorough cultivation, may be expected to produce excellent results.

This may be illustrated by relating a little of my own experience. (And here let me say, I do not intend to state or recommend anything in these remarks, that I do not consider warranted by my own experience or observation.) I commenced farming on a small place that had been let to neighboring farmers,—no one residing on the place for many years, before it came into my hands. As is often the case, all that was raised was taken off from, and nothing returned to the land. It had not been seeded down for a long time until the spring before I bought it, it was seeded to clover. Wheat had been the principal crop, alternating occasionally with oats—the last crop, which was oats, only yielding some twelve or thirteen bushels per acre. It was so badly run out, that it was difficult to get any one to take it. The spring it came into my possession, I planted six acres to corn and potatoes, the corn yielding at the rate of fifty bushels of shelled corn to the acre, and the potatoes at the rate of 160 bushels per acre. These crops were raised without any manure, except the clover sod of the previous spring's seeding, and were undoubtedly due to a change of crops, deep plowing, and good cultivation. Nor was this all; by making a general change of crops and management, the land was not only made productive and profitable, but the general appearance and credit of the place was brought up and improved so much, that when I wished to sell and buy a larger farm, it sold for about double what it cost me. I have also pursued a similar course or change of crops on my present farm,—which was considerably run down—with very satisfactory results.

There are many similar instances of the great benefit of a change of crops, that have come under my notice, but I can make room for only one or two. One is in regard to a piece of rather poor hemlock land, that, as it was not considered very good wheat land, had been kept in spring crops some years, and as the owner said, "wanted seeding down." He said he "did not expect much wheat, as it was not wheat land, and had been a going in spring crops some time and wanted rest; but that in order to get it in a good condition for meadow, and well seeded, he was going to summer fallow and sow it to wheat." Yet that field gave 30 bushels per acre, which was an extra crop for that kind of land. In another instance, the same kind of land that had been badly run to spring crops, was sown to wheat on oat stubble, and gave over 20 bushels per acre.

Having shown that a change of crops produces good results, we would continue to make use of this fact, as far as circumstances will admit, by adopting a systematic change or rotation of crops. There are many good and sufficient reasons besides those already given, in favor of a rotation; but the readers of the Co. Gent. being familiar with them, I shall proceed to consider what crops should be included in a rotation for a badly run out farm.

Perhaps the best way to determine this question, will be to consider what crops have been grown to impoverish the land. But this has already been done to some extent, in considering the necessity of a change of crops. Hence, having seen that the small grains have been the principal crops raised in running down the land, it will be best to raise as little as possible of them, and find some other crops to take their place.

Now there is one crop that I have seldom, if ever, heard charged with wearing out, or even injuring land. True, we sometimes hear of land becoming "clover sick" in England. But I believe such cases are exceedingly rare, if there are any at all, in this country, and more especially when plaster is sown on the clover, as it always should be on all but very rich lands. But on the contrary, while clover never impoverishes land, it is seldom raised without improving the soil and putting it in a much better state for other crops; and this improvement being much greater and more surprising on badly run land that has been but seldom, if ever, clovered. Again, clover can be made a very profitable crop, as I hope to show when writing more in detail in regard to its cultivation. Now for these reasons, and many more, some of which may be given another time, clover should be the leading crop in bringing up land.

Next to clover I consider corn the best crop to grow in improving the soil. The reason for this opinion can be easily made apparent to all, in this way. Who ever heard of land being run down where clover and corn were the principal crops; and these crops, made good by thorough and deep cultivation and manuring, were mostly consumed on the farm, as, of course, they should be? Such cases must be exceedingly rare, if indeed there are any. For my part, I have yet to meet with the first one. True, run down land will not continue to produce as good crops for any considerable length of time after a change as it does at first. Yet by raising clover and corn for the principal crops, and feeding a large portion of both on the farm, the land may be constantly improving, and the crops after the first and principal effect of a change is worn off, be continually growing better. It is true that corn grown year after year on the same field for a long time will on most soils run down the land. But when it is grown only once in four or five years, in a judicious rotation, and everything in relation to the crop well managed, the general effect and result will be altogether different.

But, though corn and clover should be the principal crops, yet there should be some kind of grain sown after corn to seed down with. What this should be may perhaps be best determined in each particular section, regard being had not only to what would be likely to succeed best, but also to the kind of grain that clover will take the best with, it being always important to get a good seeding.

In considering the best way to improve a badly run farm, I have not alluded to underdraining, for the reason that a man commencing on such a farm, more or less in debt, will have but little means or inclination to do anything of the kind, but will rather choose to buy a farm that may be improved without it. Still there may be instances where it will best to buy land that needs underdraining. In such cases due allowance should be made for it in purchasing, and sufficient money retained to pay at least some portion of the expense.

As good and deep cultivation and manuring, which should include a liberal use of plaster and ashes, have been frequently alluded to, it will not be necessary in concluding, to do more than merely state that while they are very important on all farms, no one need ever think to succeed for any length of time on badly worn land without giving both the strictest attention. And that, as a general change in the course of cropping and manner of cultivation will give good crops on the start; so these crops should be so managed and used as to give the largest amount of manure that it may be practical to make, thus making good crops add largely to the amount of manure, which in turn will add to the amount of crops, and this course followed up, will be sure, sooner or later, to make a good productive farm. F. *Orleans Co., N. Y.*

Stealing Fruit, and Hedges for Protection.

I have a vineyard which last year suffered greatly from the depredations of idle boys and men—so much that I lost nearly half of the fruit, and as the Empire State cannot boast of a law to protect the fruit and vine-grower, I have taken the liberty to request you to inform me through the Co. GENT., if there is not some hedge plant (in connection with a board fence,) whose thorns would make it impassable. Is the Osage Orange hardy enough? If not, how is the Buckthorn or Honey Locust? Would either of them do? Your experience will no doubt at once suggest the best aud most reliable. H. V. F. *Stuyvesant, N. Y.*

The Osage Orange forms the most terrific barrier against fruit thieves—being densely armed along all the branches or shoots with stiff and very short thorns; and when these constitute a thick hedge, attempting to pass is a most undesirable task. The winters at Stuyvesant may be too severe; yet possibly by cutting a good underdrain along or near the line of the hedge, the plants may be enabled to endure the winters, or if cut back partially by frost it may prove a serious detriment. Next to the Osage, the Honey Locust is probably best. It is very hardy, and some of the plants are quite thorny. It needs cutting back well, to form a deuse hedge. The Buckthorn is both hardy and dense in growth, but is nearly destitute of thorns. Whatever may be used for the hedge, it will prove a perfect failure, unless properly cut back, and a strip of land four or five feet wide on each side, is kept clean and well cultivated for some years.

Budding Fruit Trees.

Will you or some of your correspondents tell me the proper time for budding the peach, cherry, apple, and pear—also the "modus operandi," and much oblige a YOUNG FARMER.

As a general rule, bud when the bark peels freely, and towards the latter part of this peeling season, as the newly formed buds are then more mature and better ripened than before, and the cambium or cement between the bark and wood is thicker and causes the bud to adhere better. A little later still, when the bark is not easily raised from the wood, the operation cannot be well performed, and will be likely to fail. This period will vary much according to the influences which affect growth, as season, cultivation, soil, &c., but usually the cherry must be budded first, then the apple and pear, and lastly the peach. As soon as the cherry *begins* to form the terminate bud of its shoots, budding should be performed; this is often about or soon after midsummer. In some places, pear stocks cease growing quite as early; while in others growth continues a month later—in the latter case, the work may of course be done much later. Budding the peach is usually done in the last week of summer and the first two weeks of autumn.

The great leading requisite for success is a *freely growing stock.* On such a stock the bark will peel freely; while on an unthrifty or stunted one, it will not peel at all, and the work cannot be done. A sharp knife is essential for cutting off the bud, and slitting the bark of the stock; and the ligature must press evenly and with sufficient force to bring the cut face of the inserted bud into close contact with the wood of the stock. On a stiff thick bark, or with a stiff bud, this pressure must be stronger than with a softer bark, which might be injured if too severe. For the details of the operation, see the first number of the Illustrated Annual Register or the first volume of Rural Affairs, p. 60, where every part is minutely described and made plain by engravings.

Usefulness of Toads in Gardens.

At a recent meeting of the Brooklyn Hort. Society, the subject of toads in gardens was under discussion, when Mr. Burgess, an "old country gardener of long experience," stated "that thirty years observation had convinced him that it was the snail and not the toad which devoured strawberries and their vines. Most people attributed the destruction to toads, but he was certain that they were harmless. In gardens he considered them of great use, and all gardeners should look upon them as their best friends. Mr. Fuller endorsed all that had been said upon the subject, and he was glad to hear it. He believed the toad a most valuable auxiliary to the gardener. They were worth $500 a piece, as they keep the ground clear of insects entirely. Besides they can be domesticated! This was not generally known; nevertheless it was true. Those in his garden knew him, and would follow in order to get the insects, caterpillars, etc. Their preservation ought to be attended to. Mr. Burgess was of the opinion that there should be a fine for killing them."

ROOT PRUNING FRUIT TREES.

At the last evening meeting of the Brooklyn Horticultural Society, the subject of root pruning was discussed. Mr. Burgess said that unless properly attended to, fruit trees, when early, bear three times too much, thus exhausting themselves. They should be root pruned the first three years, and fed with rotten manure. Mr. Brophy, another practical gardener, stated that he had done root pruning for 22 years; all fruit trees require such attention, because the roots spread. Cutting gives them a healthy condition. The length of a pear tree root is wonderful; he had known those of comparatively young trees to extend twenty feet. Mr. Burgess—I have seen them thirty-five feet long. Mr. Brophy considered it necessary for any fruit tree, pear, apple, quince, cherry, etc., to be spaded round about two feet in the spring; this will improve it. He cited as proof that the best orchards are where the ground is plowed every year. It is the stirring and cutting the roots which gives them their thrifty condition. Mr. Fuller remarked that a root never feeds from the same place two years; as its main stem grows and extends, it throws out fibres or rootlets at different places. These side roots successively die off each year. The root of a grapevine feeds at the end, and if six feet long, the space between it and the vine is lost. The root should be cut down to two feet. Also with all stoned fruit trees, if six feet high, the root should be pruned down to two feet. Old quince trees should be pruned, for the rootlets die off, and the main stem needs food. When this pruning is done, the roots should be fed with rich soil, &c. Mr. Fuller illustrated what he meant by some strawberry roots; from a root of six inches he trimmed off half, and would even prefer only one inch of root to the whole of it. He also explained in an interesting and intelligent manner, that strawberries were biennial and not perennial, as generally suppposed, and showed from the roots present that the original died off when two years old. A member desired to know which was the best—to prune in spring and feed with rich soil, or in the fall and not feed the roots. Mr. Fuller replied that the operation in the spring would ensure a full crop the next season, while if done in the fall, only half a crop would be obtained.

[For the Country Gentleman and Cultivator.]

CULTURE OF INDIAN CORN.

In answer to the call of O. W. True of Maine, in the Co. Gent. of April 17th, for more specific directions for raising corn, I will detail my own practice more at length for his and others' benefit. As soon as convenient after the buckwheat has been removed, we haul and spread all the manure that may have been made after wheat sowing, and thus we go on hauling and spreading the manure pretty much as it is made through the winter as the weather may permit, finishing generally some time in April, so as to plant, if circumstances favor it, about the 1st of May. The *time* of applying the manure does not appear to affect the yield of corn, but the product is plainly in proportion to the *quantity* and *quality* of manure. By shallow plowing, I mean the shallower the better, provided the ground is turned upside down, but it is difficult to make good work under four or five inches deep. I was cured of deep plowing for corn long ago; and as for subsoiling, I have seen too much of it by others to try it myself. When we plant in hills, the poultry droppings are hoed up fine, and a man preceding the droppers divides a handfull among four or five hills, and draws a little dirt on it with his foot to prevent the grain coming in immediate contact with the manure, which would be dangerous. When we have drilled the corn, the fine manure was sowed on the surface afterward, but I would prefer having it covered with the seed, hence the inquiry in regard to the Gage.

Chester Co., Pa. A. W. W.

[For the Cultivator and Country Gentleman.]

What I Have Learned about Raising Corn in Thirty Years.

1. It is best to plow the land well before planting, because that will save work in planting and hoeing, although it does not usually increase the crop—indeed I have seen good corn grow on the same land for several years in succession without the land being plowed at all.

2. It is best (if planted in hills) to make the rows run both ways, and then the cultivator or plow will go both ways, and it will be but little work to hoe it. It is also best to put a little quick manure in the hill, to give it an early start, but if guano is used in the hill put it 5 or 6 inches one side of the seed; if it is put under the seed, it will kill it.

3. It is best to try or sprout some of the seed before planting, to be sure it will grow. Do not get the hills too thick, 3½ feet each way, four stalks in a hill, is right on my land—if I plant thicker, the ears will be small. It is better to plant some sort of corn which inclines to grow a cob longer than will fill out on the tip end, as there will then be room on the cob for as much corn to grow as the strength of the land will admit of.

4. When hoeing, the top of the ground should be kept mellow and level, and free from weeds. When ready to hoe the last time, which should be the first part of July, scatter a very little turnip seed all over the ground, and if the land is in good order, there will probably be a fair crop of turnips for cattle, provided the corn is cut up by the roots as soon as it is ripe enough; but if the corn stand too late, turnips will be scarce.

5. It is hard to keep the same sort of seed a long time, because if I save for seed the ears which are first ripe, in a few years it gives a small, early sort. If I save the largest ears for seed, it only takes a few years to get a very late sort. If I save such ears as grow two on a stalk I soon have a sort which will grow 3 or 4, or 5, ears on a stalk, but all small.

6. Corn will shrink by drying in the crib more than we are apt to suppose—probably 25 bushels out of 100. When I succeed in raising 100 bushels of well dried corn on one acre in one year, I intend to save the corn till all my neighbors can see it. C. B. *Near Springfield, Mass.*

[For the Country Gentleman and Cultivator.]

Seasoned Fence Posts---Cheap and Good Fence.

Editors Co. Gent.—Some thirty-three years since I had about five hundred panels of post and rail fence made. The posts were locust, the rails white oak Some ten years since the principal part of the posts were so decayed that it became necessary to build the fence over; there was a remnant of about forty panels that appeared to stand firm, and of course was not repaired when the balance was made over. Although ten years have now passed since the balance was made over, yet the fence stands firm, and possibly will last from two to four or six years longer.

This fence now standing, was made from well seasoned locust. Nothing could be more conclusive to my mind, that it was the condition of the timber from which the posts were made, which has caused it to last ten years longer than that which was made from green timber. For the last ten years I have built more or less fence out of strips of boards, or perhaps they might be denominated laths. I cut my timber fourteen feet long, and have it sawed three inches wide and one inch thick. The timber I use is white oak. Other kinds of hard wood might answer, but not as well. Five of these laths are a sufficient shield against any stock which has weight of character sufficient to be suffered to run at large. Three posts form a panel; each lath receives three fence nails, one at each post—nine-penny nails are the best. I have never known the nails to be drawn or broken by shrinkage, which is often the case with wide boards. A fence of this description can never be injured by the action of the wind, and unlike post and rail fence, it will not sag down hill or on sideling ground.

In the construction of a fence of this kind, the consumption of timber is but trifling, which is in many sections of our country, a matter of first importance. If the posts are locust and seasoned, it would be safe to say that a fence of this description would last thirty years. After a little practice, two men can put up twelve panels per day. Efficiency and economy considered, I like the above described fence better than any I have ever had on my farm. N. P. A.

Elm Grove, Ohio Co., Va.

[For the Country Gentleman and Cultivator.

Protection of Fruit Trees from Curculios, &c.

Messrs. Luther Tucker & Son—I had occasion to visit a friend a few days ago. I took a walk through his orchard, and observed some plum and cherry trees with something tied around them, which on closer inspection, proved to be cotton batting. On inquiring what it was for, Mr. W. informed me that it was a plan of his for preventing insects (which eat up everything in the shape of a plum, nectarine, &c., in this part of the country,) from climbing the trees and destroying the fruit.

He has some very fine plums, which have blossomed and formed fruit well for 3 years, but it was all destroyed by insects, until he used the cotton wool, since which he has never failed in having a large crop of plums, &c.

The "modus operandi" is as follows:—Procure some cotton batting, cut it in strips 3 inches wide, wrap it around the trunk of the tree about 2½ feet from the ground; then tie a string about an inch from the bottom so that the top will hang over somewhat like an umbrella. This effectually prevents the insects and ants (which are very troublesome in this neighborhood not only eating the fruit but also the tender shoots,) from passing up the trunk, as it is impossible for them to go through or to cross it.

I send you this, hoping it may be of service to some of the plum growers among whom your journal is circulated.

Jefferson County, Ky. G. D. N.

[For the Country Gentleman and Cultivator.]

TRANSFERRING BEES.

Answer to J. E., *Belmont Co., O.* He wishes to get the bees and combs from a large to a small hive. The proposition of opening the holes in the top, and setting an empty hive over, will not be likely to succeed. The trouble and annoyance that attend the bees in the attempt, will be very likely to interfere with their labors. If the hive they are in is a good one, aside from its size, and the comb new, I would cut it off at the bottom, leaving the proper dimensions. If the hive and combs are old, let them be till they swarm, when *that* may be put into a suitable hive. Three weeks from the time the first swarm issues, drive out the balance of the bees into a new hive also. If the hive they are in is too large for them to swarm, drive out a swarm at the *proper* season, set it on one side the old stand, 18 inches. The new one the same distance the other side. If either gets more than half the bees, put it farther off In 3 weeks drive out the old hive, as in the other case. Should it be desired to make the present hive smaller, the bees should be pacified with tobacco smoke first; then with a square make a mark where it is to be cut off. At this season, (April,) when most of the combs are empty, the hive may be laid on its side—even without anything over the bottom to confine the bees, and the boards of the hive sawed off as if it were an empty box. The hive may then be turned bottom up, and the combs cut off even with the bottom with a knife, one at a time, the bees brushed back as you proceed. When done, the hive may be returned to the stand, and the bees hardly know that anything has been done. The whole thing is done quietly, simply by the use of smoke. It is not necessary to smoke them *continually*, nor a great deal at any time, but an occasional puff will keep them peaceable. At the beginning a few strong puffs may be required.

St. Johnsville, N. Y. M. QUINBY.

[Translated from the French Bee Journal for the Co. Gent.]

An Editor's Experience in Keeping Italian Bees.

WHAT IT COST HIM TO INTRODUCE ITALIAN BEES INTO HIS APIARY.

Up to this time, March, 1861, (having had the Italian bee one season only,) we are not able to decide the question whether they are more active than our own bee. We find them to be very eager in their searches after honey, great gourmands even, and we frequently see them endeavoring to enter the neighboring hives. If honey be placed at a certain distance from their hive they discover it sooner than the native bee. As to its strength we would judge that in its combats with our native bee it is overcome three times out of four. The day that we received our bees they were in a most attractive good humor, the fatigue of the journey had overcome them, and we believed in good faith that they were endowed with a most exemplary sweetness of disposition. We here affirm to those who do not love bees because they fear their sting, that *these* never sting. We moreover can add, as the German gardener wrote last year to the " Society of Acclimation " at Paris, " that the Italian bee shows itself attached to its master to such a degree that there is no necessity for using a bee hat or masque in approaching its hive." But we shall take good care how we propagate the story as did the aforesaid gardener, that the Italian bee goes to work two hours before our native bee—that is to say, a long time before daylight in the morning. We are of opinion that if the French public were to encounter Italian bees foraging for honey by the aid of lanterns, they would occasion numerous inconveniences to their owners. This, of course, is often the case in Germany.

Many persons have sought to obtain these bees of us, and when we have told them the price, they have exclaimed in astonishment. But it cost us 440 francs to import 9 colonies, or about 50 francs each, (about $10 U. S. currency.) This is not dear, for we know of others who have had great difficulty in saving one colony out of three. We may here mention M. Abbe Vochelet, de l'Eure, who procured a couple of colonies last year, and they cost him 70 francs each ($14.) Whoever desires a novelty, has got to pay for it. We will do what we can to multiply these bees, so as to be able to furnish them at a reasonable price the coming autumn, otherwise our friends will have to import them and take their chance as we did.

One of our New-York correspondents, Mr. Ehrick Parmly, writes us that the Italian bee arrived in the United States last spring, and has been multiplied with success, and queens of pure blood have been sent into almost every part of the Union. More than one hundred of them reached California during the past autumn. It appears that California is the American paradise of bees. They swarm there from five to seven times a year, and the climate is such that they do not pass a single week without gathering honey. We are not surprised that the Italian bee has been propagated so much more quickly in the United States than with us, although we are so much nearer to their native country. It is because the Americans possess two things of which we have but little, they have their pockets full of dollars, and a good dose of German enthusiasm.

The same correspondent speaks of the recent commencement of a monthly bee journal published at New-York under favorable auspices. Welcome to our new brother, and may he have numerous readers. We regret exceedingly our want of knowledge of the English language, as we would not willingly lose a word of the novelties it will contain.

Bucks Co., Pa. C. W. TAYLOR.

[For the Country Gentleman and Cultivator.]

HOW TO KEEP SAP-BUCKETS.

Messrs. Editors—In the Co. Gent. of April 3d, an inquiry is raised as to the best manner of keeping sap-buckets through the summer. In reply will give my experience. My buckets are made of cedar; they are light and durable. Two hoops at the bottom and one at top. When the " sapping season " is over I collect by buckets to the " boiling place," and *scald them thoroughly* in water. This will prevent their being worm-eaten during the summer. I then stack them 3 and 4 deep *bottom up*, and put them away in a good *dry* place in an out-house. In this way have kept them from year to year, never having lost a single one from any cause. If your correspondent will pursue this course with his buckets, I will warrant them all right the next spring. Take them out the next spring, tap the hoops a little, scald them out, and you can then tap *the trees* and your buckets will hold the sap.

Having told your correspondent C. F. S. how to keep his sap-buckets, I want him to tell me how to prevent hens from eating their eggs? If there is any remedy short of *cutting their heads off*, should like to know. J. F. Babcock.

P. S. Very little maple sugar made in this vicinity, on account of depth of snow. Winter wheat is looking well.

Unadilla Forks, N. Y., April 20. J. F. B.

[For the Country Gentleman and Cultivator.]

KEEPING DUCKS---INQUIRIES.

Messrs. Editors--I wish this season to raise a dozen ducks for profit, but there is no brook or spring on the premises, and I dont want to have them wander off to some distance from the house in search of water. How can I fix a place for them in the yard? I suppose setting a tub in the ground would be a good plan, but we haven't any tubs to spare. A flour barrel of course would leak. It would be too much expense and trouble to dig out a little pit, and line it with cement. If I had a tub, trough or some such thing, I should have to fill it from the well once in a while.

Will you or some of your correspondents please tell me what is the best and easiest way to fix it, as the ducks cannot be kept at home without some access to water? Is raising ducks to sell profitable?

I wish some one would answer " A. A. U.'s " inquiry in current volume, page 173, of your paper, about a disease of fowls in which they lose their neck feathers. I have a rooster that has lost a good many feathers from his neck, and strange looking red skin shows. The rest of his skin seems very dry and scurfy. He is dull and very lean. His plumage is very shabby and homely, while before, that is last fall, he was a very handsome spangled rooster. He has been just so 4 or 5 months. His appetite is good enough, and he is only a year old. What is the trouble with him? He isn't lousy.

In cleaning out the hen-house the other day, I got a number of hen lice on me. Oh, what bothersome things they are! You have to take everything off immediately and search thoroughly for the little rascals, or you will learn how a lousy hen feels. I might tell you how I made keeping a few hens and selling their eggs profitable, even when I had to buy all the grain to feed them with, but perhaps you don't care anything about it. [Let us have it.] G. M. *Conn.*

Time Table—say for one week in July, 1862.

Date.	Field A.			Field B.			Gen. Expen.			Family.			Prod'ce account No. 1.			Cattle.			Total.	Total.	Total.	Temp.	Rain.	Wind.	Remarks.
	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Degrees.	Inches.	Direction.	
1, ...	4½			3						½	½								5	½	—	75	—	W.	Cut wheat—boy to mill.
2, ...	2			3															5	—	—	80	—	"	Cut wheat, part in A, p't in B.
3, ...																									
4, ...																									
5, ...																									
6, ...																									
Total, .																									
Value,																									
Ledger page,																									

[For the Country Gentleman and Cultivator.]

COCHRAN'S FARM ACCOUNT BOOK.

Eds. Co. Gent.—I notice in the last Co. Gent. a long article on farm accounts, and as it is a subject in which every farmer is interested, and as the first of April is approaching, the best time of the year to commence, I wish to introduce to your readers a sett of books gotten up expressly for the purpose, by the late Prof. Cochran of Detroit, Mich. It is nine years next month since I jumped, as it were, out of a city on to a farm. From that date to this, I have kept an account of most everything connected with it; and of all the books I have seen or could make, there has none seemed so well suited for a farmer as the sett mentioned above. No doubt some of your readers have seen it, and appreciate it. Five minutes every evening, one evening at the end of every month, and one day at the end of the year, will give you an account of everything—a balance sheet at the end of every month, and at the end of the year a general statement of what you have lost or gained, whether on field A. or B., dairy or cattle, hogs or sheep; and then you will know how to lay the ropes for another year.

This sett of books consists of a day-book and ledger, and an explanatory book accompanying them. In the last part of the day-book is a time table, made as follows:

[See table above.]

The time table is about as perfect one as can be arranged, as under head of remarks you can write down what your labor is at each day, as the table will show the time and place. It will do just as well for a farmer of a thousand acres, as for one of a hundred; no matter whether he keeps one hand or twenty, except in the latter case it would be necessary for him to sew a few leaves into the Ledger. The Ledger has paper ruled especially for poultry and for farm produce.

The explanatory book will teach any one in a few hour's time, so that they will have no trouble whatever. In this way also many of our farmer boys would learn how to keep books, which in after life would prove useful to them.

I have been often amused in looking over my books, as at first I thought of stock, horses were the most profitable to raise, whereas in the series of years I have lost money at it, and find that these insignificant sheep (as some designate them,) have never failed every year to pay a good interest above both feed and care, whether wool was thirty or sixty cents a pound. So of wheat, between the midge, rust and frost, it only held its own, while potatoes are as sure as *sheep*. Buying and feeding hogs is something like wool speculating; you never know anywhere near where you are to land. **Buckingham.**

Duncan's Falls, O., March 3, 1862.

We can endorse all our correspondent says in favor of Prof. Cochran's Farm Account Books. They were noticed in this paper when first issued, some years ago, and we kept them for sale as long as we could procure them. If to be had at all, now, it must be by applying to Prof. C.'s widow, Mrs. E. Cochran, Detroit, Mich. The price of the three books was $2.

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[For the Country Gentleman and Cultivator.]

COAL TAR FOR FENCE POSTS.

Messrs. Editors—In Co. Gent., vol. 19th, page 221, is an article by B. W. Rogers, in relation to the preservation of fence posts, &c., in which he recommends the use of coal tar and rosin in equal parts. I believe that the rosin is superfluous. Inclosed you will find a chip which was taken from a fence post set five years ago, smeared with coal tar alone; it was taken out about three or four inches below the surface, where a post usually commences to decay. The adjoining post, split from the same log, (and I should think the two lay side and side,) set at the same time, but not coal-tarred, has decayed so that you can kick into it more than an inch. This in my estimation, proves the efficiency of coal tar. In applying the tar, I think that the timber should be well seasoned; heat the tar, letting it boil a few minutes, then apply hot. An old paint brush is the best thing that I have ever used for putting it on. Cover the whole surface of the post that is to remain in the ground, and from eight to ten inches of that above. After it has dried, which is usually in one or two weeks, tar again as before, and as soon as dry the posts are ready to set. If Mr. Rogers will try the experiment, I think he will find that coal tar alone will be as efficient as though rosin were mixed with it.

Huron County, O. **YOUNG FARMER.**

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[For the Country Gentleman and Cultivator.]

DOMESTIC TEA.

Before I close I will give you the name of a leaf that makes as good tea as the average you get from China, for you may know that a good deal of that brought from China is not gathered from the Tea plant, but from wild herbs.

Pick the common blackberry, while young and green, and the red raspberry leaves—dry, and mix half and half. This makes a very good tea in taste and flavor. Try it.

S. W. JEWETT.

[For the Country Gentleman and Cultivator.]

POUDRETTE FACTORY.

Eds. Co. Gent.—I am very glad your correspondent J. M. C. has again called the attention of farmers to the manufacture of home-made poudrette, (as per Co. Gent. March 27.) I am not at all particular whether a brick vault or a wooden box is used in saving the fecal matters of the privy. The main object is to get the farmers to attend to this matter, and in the most economical way. For with J. M. C. "I think that this source of procuring a valuable manure is not sufficiently appreciated by our farmers, and this has been one source of waste on the farm that should be guarded against." Therefore I hope to be excused if I offer a "few more last words" upon this subject, which by the way some may think a very stale one. "But evil to him that evil thinketh."

In my communication in your issue of the 6th March, I quoted somewhat from Prof. S. W. Johnson's report, 1857, to the Connecticut State Agricultural Society. In this I quote from his Report of 1859. This I do, for I know of no one else who *handles* this matter quite as well as he does. He says: "James Smith of Deanston, the illustrious originator of 'thorough drainage,' is said to have asserted that the waste of one man for a year suffices to manure half an acre of land, and in Flanders we are told that the manure from such a source is valued at $9.00 per annum.

"We shall err on the safe side if we assume the agricultural value of the exuviæ of each inhabitant to be $5 per year. It is easy then to understand that on an ordinary sized farm which supports a family of five to ten persons an annual loss of material may occur to the amount of from $25 to $50.

"I fully believe that the night soil produced by a family of ten adults may be made to yield here, as it certainly does in Flanders, a clear profit of $100.

"This is certainly no unimportant item in agricultural practice, and our best farmers are bestowing upon it the regard it deserves."

The farmer who clears out his privy vault, but once a year, the contents of which are treated as nine-tenths of our farmers manage this matter, will be sadly disappointed if he expects to raise from it the value of five dollars from each adult member of his family. For, as says the Professor, "When urine and fæces are mixed together at a summer temperature, they almost immediately begin to decompose; the ammonia-yielding substances they contain, at once yield ammonia, which passes off into the air, and their sulphates are dissipated as sulphuretted hydrogen. This process goes on with great rapidity, and only requires a few days to complete itself. Thus the waste of nearly all the ammonia, the most *costly ingredient*, is inevitable, if the night soil be left to itself a few days in warm weather. It thus happens that the contents of necessaries left to themselves, as is the case *ninety-nine times* out of a hundred, are liable to, nay must, undergo great loss of fertilizing matters. As a result of these deteriorating processes the night soil as found in necessaries is greatly inferior in quantity, and vastly so in quality, to the original urine and fæces. This is evident from the analysis of the poudrettes which are manufactured from it.

"During the present year I have had opportunity to examine a specimen of night soil taken from a large quantity collected in the village of New Caanan, and fairly representing the average quality of this substance as found at the beginning of winter in ordinary privies. I am indebted to Edwin Hoyt, Esq., of New Canaan, for this sample."

The Professor gives the analysis, "as taken from the heap," in contrast with the original unadulterated article. But it is unnecessary here to give the figures. The result of the analysis, however, showing there was but half the original amount of ammonia in the fæces, and but one-seventh as much as in that of urine. Beside much loss of other valuable constituents of the mass.

"The night soil collected then in villages and cities may (as in this case) undergo a loss of 80 to 90 per cent. in quantity, and a large additional deterioration in quality."

This fact thus demonstrated by analytical figures that cannot be *called in question*, explains why many practical men place so little value on this fertilizer, because when left to itself, and only removed from the vaults once a year, it amounts to little more than a noisome slop, chiefly made up in fact, as well as in appearance, of paper, cobs and sticks.

I have thus freely quoted from Prof. Johnson, for he has put the matter in a language that "a child might understand," and a question here presents itself, "how can the farmer make the most of these deposits?"

The Professor recommends a similar plan to that I described in my letter in the Co. Gent. of the 6th March, viz.: Provide a sufficient quantity of well dried pulverized muck, (a good loam will answer,) which in the summer season should be daily applied in quantity sufficient to absorb the liquid portion. The whole mass in warm weather should be daily mixed by the use of a hoe, which (from the quantity of muck used) should "come out clean." "As the mass accumulates it may be removed—a cleanly, decent job." The contents may be piled up under cover, or what I think a better way, it should be spread in some outbuilding, dried, sifted, and put up in barrels or boxes for use when wanted, or the dried material may be used several times over, so says the Rev. H. Moule, pages 110 and 111 Patent Office Report 1860.

One more extract and I close. The Professor says—"This programme makes indeed a good deal of work, muck is to be hauled, and somebody must *fork over* the stuff every day; *but it will pay;* there is no doubt of that. The work will not be offensive, the compost will be rich, the privy itself will be a place not to be abhorred!" L. Bartlett.

[For the Country Gentleman and Cultivator.]

A Good and Cheap Farm Gate.

Editors Co. Gentleman—I have noticed that you have described almost every kind of farm gate except the kind I make; and as mine is the cheapest and simplest I ever heard of, I will describe it. I take a stout chestnut rail with one straight flat side, and cut it off to the right length to reach from the ground to the top of the post it is to hang to; put a band on the lower end, and an iron pin in it, say seven-eighths or one inch in diameter; then lay it down and lay on the boards, enough to make it four feet high, (beginning say four inches from bottom,) and scribe on each side of the boards, saw in and chip out with a chisel until you let them down flush; then nail them, and nail on an inch strip to hold all fast; put an inch board on each side at the latch, and bolt them, and then brace on with three ⅝ inch carriage bolts, taking about eight, costing two cents each, and the gate is done. A good man can make half a dozen a day. To hang them, put a rock at the bottom of the post, and drill a hole two inches deep in it for the foot, and either put in pin and band, or round the top of the rail, and spike on the top of your post a plank projecting over with a hole in it.

The three links and hook I consider the best fastening.

I think it a good plan to plant a tree near the post, that it may grow into a gate post by the time the present one decays.

I have 16 gates of this kind on my place, and think them a great saving of money where time is worth seven shillings a day. I intend to keep making until I am rid of the old bars. John Hinchman.

P. S.—Some of my gates have an iron eye at the top for the top pin to play in, and some have neither brace nor tie rod, and yet they do not sag. If big post sags, a wedge of stone or wood between foot rock and post brings all up right. J. H.

Cheese for the English Market.

A cheese-dealer in New-York, who ships large quantities to England, writes to a dairyman of Herkimer county as follows:—

"The cheese for the English market should be colored, but *not* too deeply—not darker than straw color, and not over salted, which was the great error committed some years ago—the great desideratum being that the *quality* of the cheese should be rich; and the cheese should be well pressed, avoiding that porous character, which we are glad to say is now much less frequent than it used to be a few years ago, but which is still occasionally complained of by English consumers."

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[For the Country Gentleman and Cultivator.]

The Average Yield of Milk and Butter per Cow.

MESSRS. EDITORS—I presume that there are many of your readers who, as well as myself, might adopt the language of J. W. PROCTOR, of Essex, Mass., and say in regard to *several* articles on the above subject, which appeared in your volumes of last year, what he has said in regard to *one* of them. "I have been *much interested*," says Mr. PROCTOR, "in Mr. Wattles' statement of his Dairy Products for several years past." I also was *much interested* in that communication, as also in several others which treat of the same subject, and of others closely connected with it; and thinking that the statements made in the course of last year would go far towards determining pretty satisfactorily what might be considered a fair milk and also a fair butter yield per cow—or at least, an average yield of these two dairy products—I concluded to collate all the statements bearing upon these points with the view of obtaining conclusions which might be considered final, or at least sufficiently satisfactory on these points, which had not yet been settled beyond all question in my own mind, nor, so far as I could judge from inquiries and conversations, in the minds of any of my neighbors. As there may be several who would like very much to have these points *settled* and fixed in their minds, or in some form of record for future reference and guidance, and as the statements made in the COUNTRY GENTLEMAN for 1861, seem sufficiently numerous and sufficiently trustworthy for the purpose of obtaining such fixed and final conclusions, I have been induced to present to your readers the results of my investigations in as brief and as serviceable a form as possible.

In deducing inferences from the facts about to be passed under review, it should be remembered that the produce of a cow, whether in milk or butter, must depend very much upon the breed, the size, the food and several other circumstances which must be taken into account, and for which allowance must be made, in forming an opinion as to what might be reasonably expected from any particular cow, or as to whether any particular cow is a good, average or poor milker.

Before proceeding to collect into one view and collate the several statements to be found in Vols. 17 and 18 of the COUNTRY GENTLEMAN, being the vols. for 1861, it may serve a good purpose, for some one at least, to state what Mr. FLINT in his "*Milch Cows and Dairy Farming*,"—the highest authority on the subject—says in regard to the average and maximum yields of Ayrshire cows. As a specimen of maximum or *very large* yields, Mr. F. says, "The Ayrshire cow has been known to produce over ten imperial gallons of good milk a day." As to *average* yields it is said, "Youatt estimates the daily yield of an Ayrshire cow, for the first two or three months after calving, at five gallons a day, on an average; for the next three months, at three gallons; and for the next four months, at one gallon and a half. This would be 850 gallons as the annual average of a cow; but allowing for some unproductive cows, he estimates the average of a dairy at 600 gallons per annum for each cow." Reckoning that 3½ gallons of the Ayrshire cow's milk will yield 1½ lbs. of butter, the annual produce in butter is estimated at 257 lbs., or of cheese at 514 lbs., at the rate of 24 lbs. to 28 gallons of milk. Aiton sets the yield much higher, saying that "thousands of the best Ayrshire cows, when in prime condition and well fed, produce 1000 gallons of milk per annum." One of the four cows originally imported into this country by John P. Cushing, Esq., of Massachusetts, gave in one year 3864 quarts, beer measure, or about 966 gallons, at 10 lbs. to the gallon, being an average of over 10½ beer quarts a day for the whole year. This and some other yields of Ayrshires in this country being not so large as those stated by Aiton, Mr. Flint suggests that our climate is less favorable to the production of milk than the moister one of Great Britain.

At page 31, vol. 17 of Co. GENT., we find an account of a cow belonging to a farmer in Maine, which with only ordinary feed, gave a produce from April to January of 250 lbs. of butter and 45 lbs. new milk cheese, besides raising a calf; and appended to the account the editorial remark that a whole dairy of such cows would be very profitable, though in herds of ten or more cows there are generally enough poor milkers to eat up a good share of the profits of the best; and that consequently, to make dairying profitable, we must discriminate more closely, and keep only *paying* cows.

At page 97, same vol., we find that Mr. SHATTUCK's dairy, consisting of 30 cows, or 22 full grown cows and 8 heifers, yielded in butter at the rate of 191 lbs. per cow, or calling the 8 heifers equal to 5 cows, at the rate of 212 lbs. per cow.

At page 98, same vol., we find several interesting items in regard to the large dairy of Z. PRATT, Esq., consisting of 50 cows. The yield of these 50 cows averaged in *milk*, for the usual season of about 8 months, 636 gallons in 1857, 651 gallons in 1858, 601 gallons in 1859, and 525 gallons in 1860, or 260, 270, 245 and 214 gallons respectively per cow for the years named. The average yield in *butter*, was for the years named, respectively 130, 161, 166 and 182 lbs. per cow for the season. The probable reason for the gradual *increase* in *butter* from year to year, while the *milk* was, with one exception, gradually *decreasing* from year to year, is not mentioned, but this remarkable fact was probably owing to a gradual increase in the *richness* of the pastures and other feeding stuff. Mr. Pratt's cows are of what is called the native breed.

At page 143, same vol., we find the "Product of a Small Dairy" of 6 cows, from which, after reserving about one quart of milk daily for table use, J. L. R. made in 1860, 1,387 lbs. of butter, which is a fraction over 231 lbs. per cow. In this statement 3 heifers and 1 farrow cow are called equal to 3 cows.

At page 162, same vol., we have an account of the *butter* yield of the dairy of Mr. ALBERT YALE, and whoever will turn to his statement and observe the several manifestations therein given of a superior and unusually judicious management, especially as to plastering his meadows and pastures, frequent salting of his cows, cutting hay earlier than usual, and a few other points, will not be surprised when he learns that, after such superior management, Mr. YALE gets a yield of 255 lbs. of butter per cow—that being the average of 10 cows for one year.

AGRICOLA.

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[For the Country Gentleman and Cultivator.]

To Keep Bugs off Squash or Cucumber Plants.

Knock the bottoms out of cheese boxes, nail on screen cloth, and set them over the hills. When not in use pack them away, and one set will last a number of years.

SUBSCRIBER.

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BARN-YARD MANURE FOR WIRE WORMS.—A Wayne Co. correspondent of the *Rural New-Yorker*, says that "common barn-yard manure in the hill will prevent the wire worm from destroying young corn." We have observed that corn, hill-manured suffered less from worms than that without, but supposed it mostly due to the more rapid growth of the corn. It will pay well in any event to try the experiment—pay in earlier corn and a surer and heavier crop.

The following Table gives the Capacity of the several Sizes of Rams, and the Dimensions of the Pipes to be used in connection with them.

Size of Ram.	Quantity of Water furnished per minute, by the spring or brook to which the ram is adapted.	Length of Pipes.		Calibre of Pipes.		Weight of Pipes, (if of Lead.)		
		Drive. Feet.	Discharge.	Drive.	Discharge.	Drive pipe for any head or fall not exceeding 10 feet.	Dis. pipe for not over 50 ft. rise.	Dis. pipe for over 50 & not exceeding 100 ft. in h't.
No. 2.	3 quarts to 2 gallons,	25 to 50,	Where desired,	¾ inch,	⅝ inch,	6 lbs. per yard.	8 lbs. per rod.	14 lbs. per rod.
3,	1½ do. to 4 do.	25 to 50,	do. do.	1 do.	½ do.	8 lbs. do.	11 lbs. do.	16 lbs. do.
4,	3 do. to 7 do.	25 to 50,	do. do.	1¼ do.	½ do.	10 lbs. do.	11 lbs. do.	16 lbs. do.
5,	7 do. to 14 do.	25 to 50,	do. do.	2 do.	¾ do.	23 lbs. do.	20 lbs. do.	28 lbs. do.
6,	12 do. to 25 do.	25 to 50,	do. do.	2½ do.	1 do.	40 lbs. do.	6 lbs. do.	8 lbs. per yard.
10,	25 do. to 75 do.	25 to 50,	do. do.	4 do.	2 do.	22 lbs. pr ft. (of cast iron.)	20 lbs. do.	23 lbs. do.

[For the Country Gentleman and Cultivator.]

THE HYDRAULIC RAM.

A correspondent of the GENTLEMAN of April 17th, remarks that "much has been said in favor of the ram and little or nothing as yet in opposition to its use; adding that "he knows instances where it has failed and been thrown aside." No doubt of it.

He desires to know how he can prevent its stopping, a source of great annoyance. In answer to his inquiries, I send you Douglas's statement concerning the quantity of water furnished by spring or brook, size of drive and discharge pipes, &c. It is of general interest to all who do or may use a ram for raising water. It is as follows:

[See Table at the head of this page.]

I judge from the statement of your correspondent, that there may be a lack of water to work a ram of that size. His strainer on the supply or drive pipe, may be too coarse or too fine, or omitted entirely; there may be a leakage in the discharge pipe; or the stroke of the valve may be too long. Any one of these difficulties or a combination of two or more of them, would account for the stoppage.

Greater head or fall than named in the table, will demand heavier pipes used both for driving and discharging. Mr. Douglas says, "where the fall is great a small ram should be used. A brook or spring furnishing 7 gallons a minute, with a fall of 8 or 10 feet, No. 4 should be used. If only three or four feet fall, then use No. 5.

Douglas states that "the ram may be used where but 18 inches of fall can be had, yet more is better." To enable any person to make his own calculation as to what fall is sufficient to supply a ram to raise a given amount of water where wanted, it may be safely calculated that about one-seventh part of the water can be raised and discharged, say 10 times as high as the fall applied, and so on in the same proportion as the fall or rise varies." Mr. D. adds, "if a ram be placed under a head of 5 feet, of 7 gallons drawn from the spring or brook, one gallon may be raised 25 feet, or half a gallon 50 feet. Or with 10 feet fall, of 14 gallons drawn from the spring, one may can be raised 100 feet, and so on in like proportion."

Prof. Loomis says, "the power expended in working a ram is the product of the quantity of water used, multiplied by the height through which it falls before it acts on the machine. The useful effect produced is the product of the quantity of water raised, multiplied by the height to which it is elevated. In experiments carefully made for the purpose, the expense was found to be to the useful effect as 50 to 32; that is to say, *the machine employed usefully nearly two-thirds of its force.* The valve may be made to close from 40 to 100 times a minute, according to the range of motion allowed it, and the pressure of the water."

An English writer on the hydraulic ram says—"it is an exceedingly useful machine for elevating water to a considerable height. It is simple in construction and has no parts liable to get out of order, and will work continuously for years without repairs, after being once put in operation, all that is required being a small stream of water with a few feet of fall, it being dependent for its operation on the momentum of the falling stream, which is confined in a supply pipe."

Thus the reason is quite apparent why your correspondent, Messrs. Editors, "has seen nothing in opposition to the general adoption of the ram." A deficiency in fall or in supply of water, a leak in the discharge pipe, or of too long a stroke in the movement of the valve, which in Douglas's rams is so made as to be adjusted to a longer or shorter stroke—any one, I say, of these defects, may be productive of evil. So it is if a man builds his mill where the fall is insufficient, or the supply of water is too small, his case would be a failure, but this would be no argument against the use of water-power for driving machinery. So of the ram. When the requisite conditions are all complied with, the ram will work with as much certainty as does the machinery in a mill driven by water-power, where there is a good fall and water plenty.

GEORGE.

* * *

[For the Country Gentleman and Cultivator.]

The Culture and Removal of the White Pine.

Of all American Evergreens, none are more beautiful or of more early and rapid growth to maturity than the pine; hence the value of the pine becomes enhanced to those who would attain an early maturity in shrubbery for the adornment of a rural home and its surroundings. It is best to remove the pine from the mountains where they usually grow, at as early an age as practicable—say when the plant is 6 or 8 inches in height, at which time you will place them in your garden in rows three feet apart, and a space of two feet between each plant in the row. Be careful that each plant has a ball of earth attached to its roots as large as a quart cup. You will now, during the growing season, be careful to work them as you would your garden vegetables.

Your trees may now remain from two to four years in your nursery, as may best suit your convenience. The most desirable size for transplanting is when the tree has attained the height of three or four feet, at which time it will have become perfectly acclimated to your soil. The best time I find for removal to be from the 20th of March to the 15th of April, the winds having to a great degree abated. In removing your pines from the nursery, be careful to prepare a hole from three to four feet in diameter, and loosening the bottom six or eight inches below the roots of the tree. Never set the tree deeper than it grew in the nursery. Be careful in removing, to dig sufficiently far from the body to avoid injuring or bruising the small fibrous roots, as these are necessary to the life and growth of the tree. Take up all the earth you can, which will adhere to the roots in removing from its bed, placing, if necessary, a broad plank or sheet under the roots in lifting the tree, to prevent the dislocating of the earth from the roots. Set in carefully, and tramp with the feet until all is firm and compact. If the season is very dry, water occasionally, and if the tree is large, three stakes may be driven diagonally, to which fasten the body, to prevent the winds from loosening the earth at the roots. Be careful not to place them in clumps in your landscape grounds, nearer each other than 14 or 16 feet, or you would avoid a second removal.

I have adopted the above plan in the cultivation of the pine, having grown many hundreds of them, and scarcely lost a tree. ISAAC P. SHELBY. *Fayette Co., Ky.*

[For the Country Gentleman and Cultivator.]

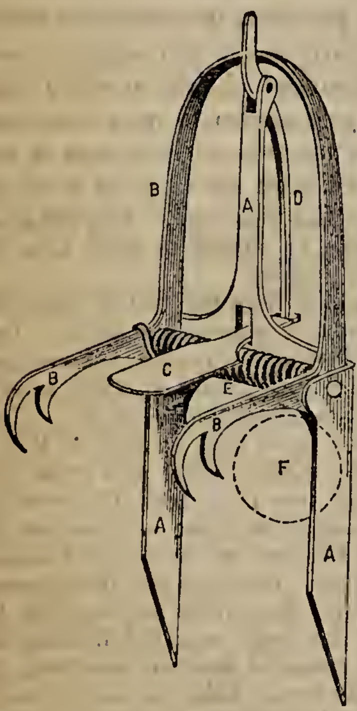
AN EFFECTIVE MOLE TRAP.

Messrs. Eds.—The season is approaching when the gardener will resume his labors. I often think of his trials, because I have frequently been frustrated in my own efforts in this occupation. My present purpose is to write of an intruder, which is in many gardens extremely troublesome and vexatious, and tell you how I rid my garden of him. I refer to the garden mole.

Several years ago I commenced a garden in a piece of warm sandy loam, which had been for many years in meadow. As soon as the ground was planted the moles commenced their subsoiling and surface plowing. My peas, beans, corn and melons were extensively raised quite too early in the season, and received so great a degree of aeration that they died outright. I was sorely tried, and resolved to exterminate the moles speedily. But I found it easier to resolve than to do. By much watching I caught two or three, but their successors came promptly forward. I then tried to hire boys to watch them, and offered them four shillings apiece for all they would catch. I got no moles in this way.

I then commenced making traps. After several trials I succeeded in my efforts. Judge of my satisfaction as I took the "little plagues" out of the trap, morning, noon and evening.

I supposed a dozen or two were all my grounds contained. I was greatly mistaken. I kept the trap set continually; and when autumn came I had caught seventy-two. The next season I caught a greater number still, and nearly exterminated them from my garden and an adjoining meadow of two acres. Last season I caught five only. I did not see a furrow raised by them until the middle of August, and not a mole hill in the meadow.



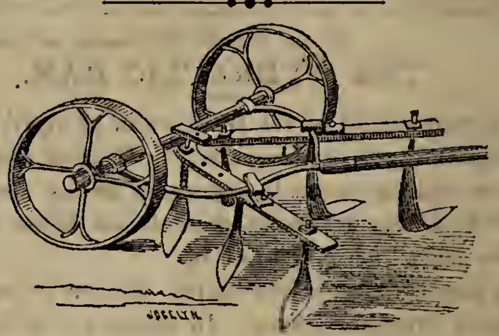
Mole Trap.

A. A. A. the body of the trap, 10 inches long—B. B. B. the hooks connected together by a bow—C. the pan, which rises as the mole plows along under it, and releases the trigger D., when the hooks strike down on to the mole. E. a coil spring.—F., in the dotted line, is the centre of the mole's passage, two or three inches below the surface of the ground.

I send you a drawing of the trap for the benefit of gardeners. Some people suppose the mole is useful in gardens by destroying wire worms. Pigs are equally so. I have dissected a great many of them, and never found anything in their stomachs except the common earth or angle worm. They do not eat vegetables, but they manage to destroy them by ill-directed plowing. I have had strawberry beds, and beds of young seedlings, ruined by them. They can easily be caught by the trap if the gardener will pay attention to their habits, and learn to set the trap right. After my success with my trap, a tool maker in our village commenced making a few for the neighbors, and by degrees they have been scattered over several towns. They cost about six shillings. [See advertisement in another column.]

To set the trap—first stamp down all the mole paths in the garden, in order to learn where they come in, which is nearly always from an adjoining piece of turf ground. After having chosen your place to set the trap, scrape away the surface down to the mole's path. Then stick the legs of the trap down close by the side of the path, until the coil spring comes down to the hole, and lies lengthwise of the same, directly over it. Then raise the hooks and set the trap. It is necessary to pack a little dirt under the pan, and some more on each side of the same, to exclude the light from the passage, or the mole will dig deeper as he passes under the hooks, and not get caught. He springs the trap by raising the pan. The mole cannot be baited. A trap must be so made as to shut down on him when he raises the earth.

Gaylordsville, Conn. C.



Hand Cultivator for Garden Use.

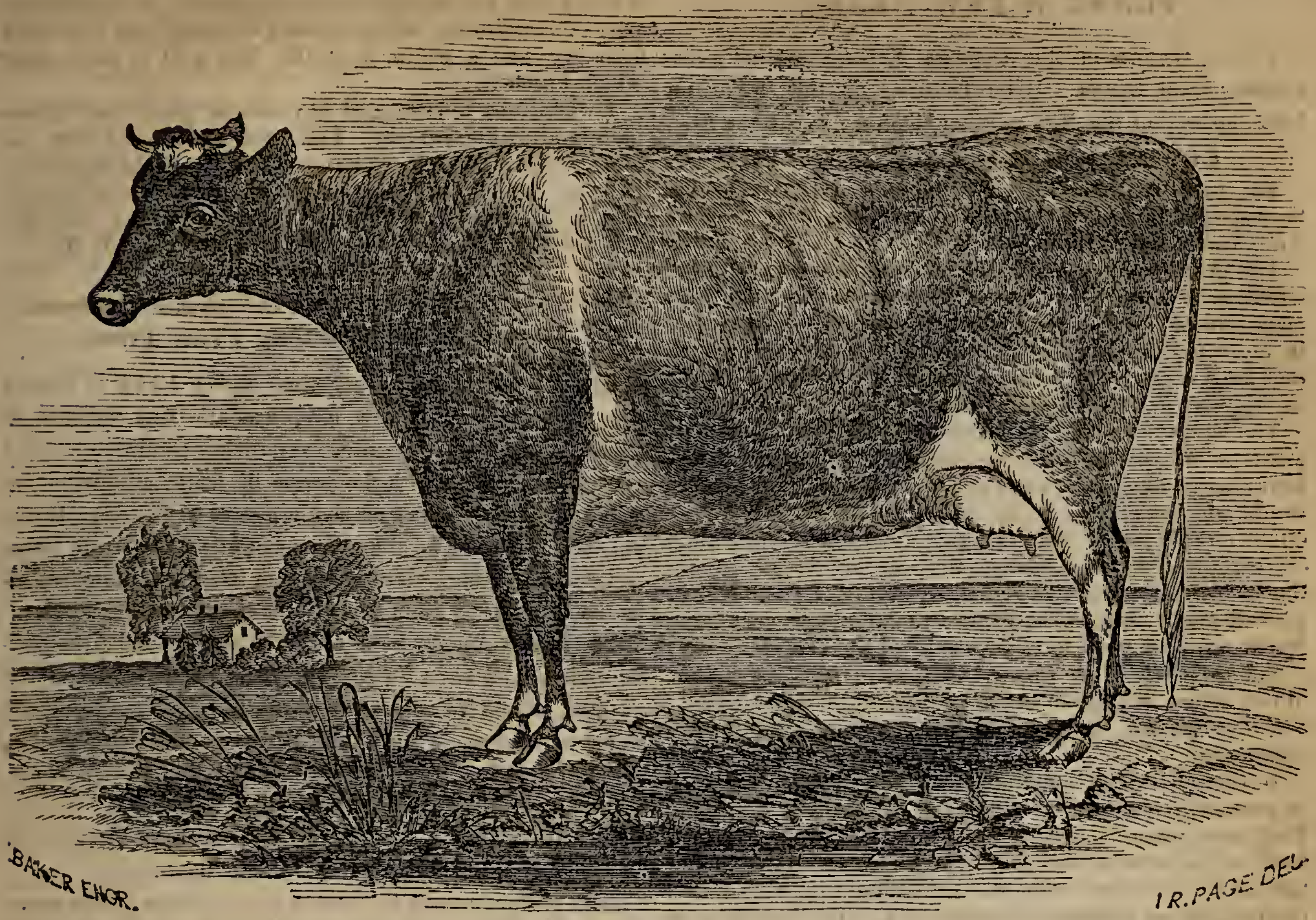
The accompanying illustration represents an implement made by Haines & Pell, New-York, for the cultivation of roots or any garden vegetables, between the rows. It is pushed forward by a long handle, the lower part of which only is shown in the engraving, the wheels and knives straddling the rows, so that the whole space between them is cut over and loosened up, the first set of knives being adjusted as closely as practicable to the row, and the others spreading apart as widely as the distance between the rows will admit. It seems to be a convenient and promising tool.

THE JARRING PROCESS ONCE MORE

Messrs. Editors—Last year all my peaches were stung by the curculio. In order to prevent their being destroyed this year, I wish to cover the fruit with some suitable material that will effectually prevent their falling victims to the rapacity of the "little Turk." Perhaps you or some of your correspondents will inform me what material is the best and cheapest for this purpose.

West Chester, Pa. C. D. F.

We know of no external application that will prevent the attacks of the curculio, that does not cost more to apply *effectually*, than to kill them by the jarring process, which we have so often described. The lime application is repeatedly recommended, and has succeeded by continual repetition, when there are but few insects. A neighbor used it thoroughly and extensively on many trees, and among the rest on several nectarine trees. Every rain would wash it off, and even heavy dews would leave bare spots on the young fruit; the motion of wind among the leaves would wear off the lime coating; and as soon as a single bare spot could be found the insect was sure to thrust in its egg-depositor. With all the labor thus expended, the owner had half a dozen nectarines. Yet, on further inquiry, it was found that these grew on a tree under which a young calf was kept tied during the curculio season, and which frightened them away. On a small scale, the best way is to *jar* (not shake) the insects daily without a single intermission down on white sheets and kill them. On a larger scale, the orchard must be converted into a yard for pigs and poultry, which must be sufficiently numerous to destroy at once all the stung fruit that falls. When the insects are numerous, both remedies (jarring, and animals,) must be combined. To make the jar sharp and effectual, cut off a limb, leaving a stump an inch long, on which strike with an axe or sledge. All this is familiar to many of our readers, but is repeated in answer to numerous inquiries from others.


BAKER ENGR.
J. R. PAGE DEL.

ALDERNEY COW "JURA."

Imported by and the property of R. L. Maitland, Esq., of Newport, R. I.

[For the Country Gentleman and Cultivator.]

SHEEP EATING EACH OTHER'S WOOL.

Messrs. Editors—Being desirous to know the cause of my sheep eating one another's wool, I take this course thinking perhaps some of your correspondents might suggest something that would explain the cause, and also a preventive.

The circumstances are as follows: I had in the fall upwards of two hundred merino ewes, which I intended to breed from. I divided them equally, selecting all of the greasiest wool ewes, which constituted one flock—the remainder made up another flock. The former were confined to their yard, with a small range of two acres, from which they got their drink. The latter had a yard similar to the former, and access to a meadow of 40 acres. Both were fed hay from the same mow, the quality of which for the first three weeks, at the commencement of winter, was coarse, which grew on wettish land, and was salted about 3 quarts to the load. The balance of the time they were fed good timothy hay. Both flocks are in good condition.

The former flock I noticed about the first of February, that from some of them there was a spot of wool torn out from their hips as large as your hand, which increases, and also on the inside of their hind legs, and up under their belly—some on their sides, and some on their forward legs. I watched them closely, and found that some were as greedy for it as they would be for fresh grass in the spring of the year. I immediately went to sorting such out. As fast as I would discover one eating from another, I put them by themselves; but I soon gave that up, for they would strip one another naked.

The latter flock is free from the perplexing and unprofitable habit of the former. I am also wintering four other flocks, and nothing of the kind is to be seen.

I have fed sulphur and salt frequently, and at present keep it before them. I have filled their wool with snuff, but found that useless. And have also fed them pine boughs.

Now, Messrs. Editors, can you, or any of the readers of the Co. Gent., give any information relative to the cause of the above difficulty, or a preventive? Either will be thankfully received. C. H. R.

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[For the Country Gentleman and Cultivator.]

LICE ON CALVES.

A writer in the Co. Gentleman of April 10th, recommends a free use of sulphur for some time, to destroy this pest of young stock. The process seems too slow to accomplish the end desired; as you must use sulphur til the blood has absorbed enough to kill the lice. I should fear that this practice would injure the creature before it would kill the tormenters.

I once knew a physician, when caterpillars were making sad havoc with the fruit trees, and when the profession were denouncing the use of calomel, as it was a poison; who set his student to try the experiment of inoculating some trees with calomel, thinking that the sap would carry it into the foliage and thus destroy the caterpillars; but it signally failed, and they in time destroyed the trees. The best and surest remedy I ever knew or tried, is to take a strong decoction of tobacco in a pleasant day, and saturate the animal afflicted to the skin all over with it, and your vermin are gone at once. It is a perfect dead shot, and is not injurious to the animal which gets the basting. It is equally destructive to ticks on sheep.

Mexico, N. Y. HIRAM WALKER.

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Vermont Sheep.—We see it stated that Edwin Hammond of Middlebury, recently bought seven ewes of E. S. Stowell of Cornwall, for which he paid $725. Also, that Geo. Campbell of Westminster, purchased of Mr. Hammond six sheep for $1,400, and five of W. R. Sanford of Orwell, for $500.

PLANT A FEW BEANS.

Friend Harris of the *Genesee Farmer*, annually discourses upon Beans. His reflections on this topic for 1862, appear in the May number, and are as follows:—

Cultivation of the White Bean.

For years we have earnestly advocated the more extensive cultivation of the white bean as a field crop on American Farms.

The great need of American agriculture is a good "fallow crop"—some plant that will stand our hot, dry summers, enrich the soil, and allow the use of the horse hoe to clean the land during its growth. A plant, in short, that shall occupy the same place in our rotation as the turnip does in English agriculture.

The white bean comes nearer to this than any other plant yet introduced. If the beans are consumed on the farm—as turnips always are in England—their cultivation would add materially to its fertility. There can be no doubt on this point. All the leguminous plants—including clover, peas, vetches, beans, etc.—contain large quantities of nitrogen, and this when consumed by animals or plowed under, is converted into ammonia—the very thing which we most need for the growth of the cereals.

Let us then grow beans. No crop will pay better. When prices are good, as at present, they can be sold; and if prices fall, they can be fed out on the farm with advantage.

In regard to their cultivation we have written so much in previous volumes that little need be added at this time. They are generally grown on warm, light soil, but will succeed on almost any soil if properly cultivated. For this, as for all other crops, the land should be well underdrained, either naturally or artificially. The land may be plowed in the fall and again in the spring, and made clean and mellow before planting; or a clover sod may be turned over, and the beans planted at once. The common "white medium" is generally considered the most productive variety, but the White Mountain or Marrow yields nearly or quite as well, and brings a better price. It is a little larger, rounder, plumper and handsomer, and is gaining in popular esteem.

They may be planted in hills 2½ feet apart, and 15 to 18 inches apart in the rows, dropping five to six beans in each hill; or they may be drilled in with a machine, in rows 2½ feet apart, and a single bean 2 inches apart in the rows. The latter, perhaps, gives the larger crop, but the former requires less labor in hoeing, etc. In this section they are usually planted the first week in June.

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[For the Country Gentleman and Cultivator.]

BUCKWHEAT A GOOD CROP.

Messrs. Editors—I noticed in the Co. Gent. of some time ago, a communication from J. W. Colburn, on buckwheat being a bad crop for the soil. I consider buckwheat to be a good crop—if not for the soil, it is for the granary. I do not think it a very exhausting crop—not so much so as many others. It seems to draw its subsistence from the atmosphere more than any other crop I raise, and I think so well of the crop that I raised 550 bushels in the year 1860, and nearly as much in 1861. I make use of it for feeding both man and beast, principally to milch cows. I feed it about three parts of buckwheat meal, and one part corn meal.

I will give you a little of my experience in raising buckwheat. I have a field of ten acres—a part of it has been sown to buckwheat every year for the last thirty years, and the other part nearly as long, *without any manure*. The first fifteen years it usually grew too large, and some part of it would lodge on the ground. Late years it does not grow quite so stout. I now think of letting it rest for a time, or put in some other crop. It has yielded from 25 to 30 bushels per acre on an average each year, with the exception of two years. One year, I think in 1844, we had very hot weather the latter part of August or fore part of September, which blasted the crop, and one other year we had a white frost the fore part of September which killed it.

I would not recommend any one to plant corn immediately after buckwheat. You need not ask me why, for I cannot tell you; but I have tried it, and have seen it tried by others, and have never known but one instance of a good crop of corn raised after buckwheat, and that was *very highly manured*. B. *Clinton Co., N. Y.*

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[For the Country Gentleman and Cultivator.

Benefit of Hogs among Fruit Trees.

Eds. Co. Gent.—The principal object I had in buying the farm on which I now live, was the fine orchards of fruit. They were then in a very thrifty condition, loaded year after year, with large crops of fruit; but when we came to picking and packing, we were obliged to throw out large portions of them on account of the worm holes and curculio stings with which they were more or less affected, rendering them unsaleable and fit only for cider.

The lower orchard, (the orchards are divided by a public highway,) I have for several years past used as a hog pasture, with very satisfactory results. The apples which were heretofore wormy and knotty, are now as fair, smooth, and free from blemish, as one would wish to see. I allow my hogs and pigs, (the more the better,) free access to the orchards the year round, except a few days in October, while gathering and packing the apples.

It is seldom apples fall before they are ripe unless something ails them, and that *something* is usually an apple worm or a curculio, and as the pigs are not very particular about their diet, all goes down with a relish, thereby destroying millions of troublesome insects which could not otherwise be got rid of.

The hogs keep the orchard thoroughly plowed and manured without any assistance from me; keep down the grass and weeds, rendering the orchard much thriftier than could be done by broadcast cultivation, as the hogs do not disturb the roots, but a plow would, besides the inconvenience of working among trees, where you are liable to do more injury than good.

My upper orchard I am obliged to mow, and one would be astonished at the comparative quantity and quality of the fruit in the two orchards. The difference in quantity is as six to one, and the quality 100 per cent.

The pear and cherry trees enclosed in the orchard in which the hogs run, are loaded nearly every year with crops of fruit which would make an amateur's mouth water—while on trees of the same varieties just across the road, can only be found knotty, wormy, unpalatable specimens. Now I can no more afford to be without hogs in my orchard, than I can afford to be without fruit; for without one I should be almost certain to be deprived of the other; and by adopting this course I seldom fail of having a good crop, and *never* fail of finding a ready sale at remunerative prices, even when there is a large crop.

If any of the readers of your excellent journal are skeptical on this point, let them try it for a term of years, and I believe their skepticism will vanish with the increase in their crops.

Now, neighbors, don't try the experiment with any of your *long-tailed Shanghia racer breeds, with a snout like a ten foot pole*, for you'll surely be disappointed with the result. Such hogs you can never satisfy; they will tear the bark from and undermine your trees, besides soon acquire the knack of standing on their hind legs and help themselves to the best fruit. This I know from experience. But instead of the above mentioned breed, try the Yorkshire, Suffolk or Essex, and you will be doubly paid. J. P. "*Brace Farm*," *Oswego, N. Y.*

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☞ Double Chinese Primroses, capable of being propagated by seed, have been introduced into England.

[For the Country Gentleman and Cultivator.]

A GOOD FARM FENCE.

Take good straight rails from 15 to 20 feet long, and posts from 6 to 6½ feet long, and 5 to 7 inches in diameter. Chestnut is good. After you have heaped up a heap of brush to burn, put the ends of the posts you are going to set in the ground, on the heap, and then set the bushes on fire, and char the ends of the posts, which will prevent them from rotting so soon, taking care not to burn them too much. Then dig the holes from 2 to 2½ feet deep, and set the posts and wedge them firmly in with stones and dirt. The rails of a panel should be of equal length. Then have one man take hold of each end of a rail, and spike it to the post; 4 rails high is enough.

Three men could build a fence very fast—one to dig the holes, the other two to build the fence. A fence built in this way is very strong—the rails not liable to be thrown by unruly cattle, takes up very little room, and needs no braces—plow close up to each side if you wish, and a very good fence to look at.

Instead of having bars at the entrance of your fields, make a gate in this way: Take two pieces of joists four inches square, and as high as you wish for the end posts. Then take five strips of inch board for the slats, the lower one being the widest, the next a little narrower, and so on, the top one being the narrowest. Then mortice holes in the end posts, and insert the slats and pin them. Take two strips for braces, one on each side. Fasten one end of the brace near the heel of the end post on which the gate is going to swing, and the other end near the top of the opposite post, and nail them to the slats. D. Davis.

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[For the Country Gentleman and Cultivator.]

MILK FOR HORSES.

Messrs. Editors—I wish to be informed by some of your numerous correspondents who feel from experience or from observation, able to give reliable information as to the value of cow's milk—skimmed or sour milk—for horse feed. So far as I have heard anything said on the subject, opinions vary much. One gentleman thinks he has spoiled two or three good horses by feeding them milk pretty freely. They seemed to thrive upon it, and were fat and sleek, but in a few months had the *heaves*. I have heard others say that nothing was better for a horse than a few quarts of sour milk daily; one that it was a common practice to feed horses intended for the race or trotting course, with milk while preparing them. I have also heard it suggested that it was an excellent article to feed to young colts, to induce their vigorous and healthy growth, especially while being fed on hay, or hay and grain. In the midst of all this diversity of opinion, I am in doubt whether to throw away my sour milk, (for I will not keep a pig,) or feed it to my horse, which seems to be fond of it. If it is good for colts, I do not know why it should not be good, at least harmless, for a working horse. If some one is able to give light on this matter, I should like to see it. A Reader. *Stowe, Vt.*

* * *

[For the Country Gentleman and Cultivator.]

ANOTHER LARGE EGG.

I noticed in your paper of the 27th ultimo, an account of a "big egg." Now we don't pretend to be great poulterers and egg-growers, but I think we have had some eggs here as large as Mr. Contant's. I did not measure mine, but weighed them, and I now assert that in the month of May 1861, one of my hens laid four eggs which weighed 16 oz. in all. And one of my neighbor's hens laid several, varying in weight from 4 oz. to 4½ oz. each. My hens are a cross between the Shanghai and common dung-hill fowl, being about ¼ bred Shanghai, weighing from 3 to 4 lbs. each.

Clifton, N. B. A SUBSCRIBER.

[For the Country Gentleman and Cultivator.]

SUCCESSFUL RAISING OF CHICKENS.

Editors Country Gentleman—Below I enclose you a statement, which if you think would be interesting to the readers of your paper, please insert. You can depend on its reliability:

Patrick Donlon, who lives with Lewis B. Brown of Westchester Co., and who has the entire charge of his poultry, set seven hens this spring. The result is one hundred and twenty-six chickens, all doing well. Last season he set eleven hens—the result one hundred and ninety-two. In the years 1859 and '60, the average was about the same, and in almost every instance, every egg hatched a chicken. He selects large hens, always puts with them 18, 19 or 20 eggs. The above result was not obtained by setting many hens, and then selecting some of the best, but this year seven is all he has set. Last year eleven was all he set. H.

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[For the Country Gentleman and Cultivator.]

PROFITS OF POULTRY.

Poultry-Yard Account, from March 1st, 1861, to April 1st, 1862.

Poultry-Yard,—Dr.

1861, March 1.	To stock on hand:	
	68 pair fowls, at 75 cents,	$51.00
	3 ducks,	2.50
	4 guineas, at 31 cents,	1.24
	6 turkeys, at $1,	6.00
	To 42 dozen eggs set,	4.90
Dec.	" Poultry bought,	6.55
	" 106 bushels feed,	45.71
	Total debits,	$117.90

Poultry-Yard,—Cr.

1861.	By 543¼ dozen eggs found,	$76.72
	" Poultry sold and used,	117.96
	" " on hand April 15, 1862:	
	32 pair fowls, 75 cents,	24.00
	4 " turkeys, $2,	8.00
	2 " guineas, 62 cents,	1.24
	Total credits,	$227.92
	Deduct debits,	117.90
	Profits,	$110.02

The feed of these poultry is corn, as a general thing—occasionally we feed them oats or rye screenings. From the above it seems that the profit on each hen was nearly 75 cents.

Hunterdon Co., N. J. J. T.

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[For the Country Gentleman and Cultivator.]

OILING HARNESS.

Messrs. Editors—Seeing J. L. R.'s communication in regard to oiling old harness, I will offer an improvement on his method of doing the job. It is as follows: Take Castile soap and make a *strong* suds with warm water, and wash the harness with it thoroughly; then let it dry, and then oil it with good clean oil, and it will look equal to new. The soap is equal to one oiling, and it leaves the harness perfectly clean, and is much better than to use clean warm water. I have used hen's oil with good success, and think it better than neat's foot oil for the purpose. Will J. L. R. please to try this method, and report the result? Massachusetts.

* * *

Recipe for Making Rhubarb Wine.

A correspondent of the Bucks County Intelligencer, gives the following recipe for making "American Champagne," or wine from the stalks of the rhubarb or pie plant;

Cut the rhubarb into small pieces, put it into just enough water to keep it from burning, boil until quite tender, strain through a coarse cloth. To one gallon of this liquid, add two gallons of water; to each gallon thus made, put four pounds of sugar; ferment in an open vessel forty-eight hours, then take off the scum, and add one pint of best brandy to every four gallons, after which put it into an air-tight cask; then let it remain six months undisturbed when it will be ready for bottling. In each bottle put one raisin, and seal the bottle well.

* * *

Wintering Sheep Successfully. — Thomas Gorby gives in the Ohio Farmer the following requisites for this purpose:—He says, "*Good shelter*, *regular feeding*, *variety of proper food*, *dry beds*, and *daily watering*, are indispensable to success with sheep."

On the Manufacture of Cheddar Cheese.

[In October last there was a magnificent exhibition of dairy produce at Kilmarnock, Scotland. The Highland Society contributed liberally for premiums. One of them was £20 for the best sweet milk cheese, which was carried by Mr. M'Adam, who has kindly furnished an outline of the method he follows in its manufacture.—Ed. Transactions of Highland Ag. Society.]

For various reasons I prefer making my cheese according to the Cheddar system. If the system is carried out with care and intelligence, one is almost certain of obtaining a lot more uniform and superior in quality than could possibly be made on the old Dunlop system. The latter is neither so easy nor so cleanly. In regard to quantity I have found, after weighing the milk with the utmost care for two successive days, and making one half on the Cheddar mode and the other half on the Dunlop, that the result is always in favor of the Cheddar.

The difference, however, in the price of the two kinds of cheese is important. In 1859 I sold my whole stock made in that season at £3 12s. 6d. per cwt., or rather over 14s. 6d. a stone of 24 lbs. In 1860 I sold all my cheese made between 23d March and 22d of November, at £3 15s., or upwards of 16s. a stone. Last year I sent the whole to an agent in London, and after deducting all charges, had a return of nearly 14s. 6d. a stone.

On the other hand, I have known of no Dunlop cheese sold during the last five years which has realized anything like what I have done. The difference has been at least 3s. per stone in favor of Cheddar.

I make my cheese once a day. The evening's milk, as soon as it is drawn from the cows, is put into shallow tin boynes to cool. Next morning this is put through a very fine wire sieve into the steeping tub, while the morning's milk is added as carried in from the byre. In May and the four succeeding months the milk put in this manner together in the evening and morning will generally have a temperature of about 80 degrees Fahrenheit. If it is not so high, a little of the evening's milk is warmed in boiling water to raise the whole to the above temperature. After this, the sour whey, annatto, and as much rennet as will coagulate the whole in an hour, are added and well mixed.

I generally put in about four to five quarts of very sour whey to about 140 gallons of milk. As soon as the curd is properly formed, I commence to break it with a hand breaker made of tin and wire, which is somewhat like a riddle, and having a wooden handle about three feet long affixed to the middle. When partially broken, the curd is allowed to subside a little. As much whey is then drawn off and heated as will bring the whole up to to a temperature of 80 degrees. After this, breaking is resumed, and the temperature maintained by adding more heated whey.

Nothing further is done for the next hour, but to draw off and heat as much whey as will raise the temperature to 100 degrees. At the end of the hour a portion of the whey is run off, and the curd is afterwards very gently broken with a shovel-breaker.

An assistant now gently pours as much heated whey as will once more raise the temperature to 100 degrees. During the time the whey is pouring, the whole is actively stirred, but afterwards more gently, till the curd has acquired proper firmness. I cannot say how long it may be necessary to stir. If too much acid is present, less time is required, and if too little acid, more is necessary. The time will vary, according to these circumstances, from twenty-five to forty minutes.

When stirring is finished, the curd is left half an hour, and then the whey is all drawn off. One side of the tub is raised a little to allow this to take place more perfectly. The curd is then heaped up to the highest side of the tub, covered with a cloth, and left for half an hour. After this interval, it is cut into large slices, turned upside down, covered up, and left for another half-hour. Then it is torn into thin strips and spread on a cooler, on which it is allowed to lie for another half-hour. After thus being turned upside down, it is left another half-hour longer.

The curd is then vatted and put into the press, on which 28 lbs. are suspended for about twenty minutes. Afterwards it is taken out, milled and salted. Cheshire salt is used at the rate of 2 lbs. to the cwt. It is salted in the cooler, and if it is above the desired temperature it is allowed to lie, perhaps for half an hour, and stirred up once or twice. Our dairy being very warm, I am unable to cool down the curd as low as I could wish before making it up.

On referring to my diary, I find that not one of the cheeses I exhibited at Kilmarnock was below 68 lbs. when vatted. The cheese is made up between two and three o'clock, p. m., and a dry cloth put on it the same evening. What I make on Monday is carried to the cheese-room on Thursday. Each cheese only gets one dry cloth daily. The room is over the dwelling house and dairy. Its temperature during summer ranges between 65 degrees to 80 degrees. The specimens of cheese I exhibited at Kilmarnock were not subjected to any artificial heat.

I use an oak steeping tub in preference to any other. All the implements and utensils are kept as sweet and clean as possible. The weight or pressure put upon the cheese is the same throughout the different stages of the manufacture.

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[For the Country Gentleman and Cultivator.]

TRELLIS FOR GRAPES, &c.

In your issue of Feb. 20, page 126, J. Knox describes his trellis as being eight feet in height. This I think to be too high for grapes as far north as this, although it may of course be the proper height at Pittsburgh. In my opinion, 4 to 5 feet is the limit in height to which a vine should be trained. When this limit is exceeded, the size and quality of the grapes at the extremity of the vines, will be deteriorated. This is not the case however, with laterals; I have often noticed large well ripened clusters of grapes upon laterals at least 8 or 9 feet from the vine, while those upon the main stock, five feet from the ground, were smaller and of an inferior quality. Another and more potent reason for training vines low, is this: they are not so liable to be injured by the cold of our Northern climate as when trained eight or ten feet from the surface. Almost every one has noticed, after a severe winter, the dead stalks upon the vines of those trained upon high trellises, and even sometimes killing the whole top down within four or five feet of the ground. This of itself would seem to prove the value of low training; and frosts will often injure vines six or eight feet from the ground, while nearer the ground the vine remains uninjured.

Last fall I visited the vineyard of Mr. Hungerford of Ithaca. His vineyard is situated on the slope west of the village, and about half a mile from it. The slope descends to the east. The vineyard is composed of several gradually swelling knolls, some of which are partially terraced, the soil being a high sandy loam, needing, as he informed me, no underdraining. He has, in all, from three to five acres set to grapes, three of which are in bearing condition—all or most mostly all Isabella vines. I never saw more thriving vines, nor better wood; and the grapes, I cannot describe them. They were certainly the most splendid Isabellas that I ever saw. The bunches were exceedingly large, some of them weighing over a pound—to the taste they were exceedingly delicious. He trains his vines to wire trellis, or two or three wires stretched upon posts set twelve or fifteen feet asunder. I noticed that almost every cluster was within two or three feet of the ground. I inquired the cause of this. He stated that one of the late frosts killed all of the blows, and they blossoming again but few came out. I do not hardly think this to be the cause of their being so near to the ground; but I think that not all, but a part of the blossoms were killed, and those at the top of the trellis. This is but another proof that low training is beneficial. Train low, but allow the laterals good length.

Cayuga Co., May, 1862. E. A. KING.

The Entomologist.

[For the Country Gentleman and Cultivator.]

No. 31.---Insect Tumors and Wounds in Raspberry Stalks.

A few years since E. S. Holmes, Esq., of Lockport, N. Y., sent me some stalks of the wild red raspberry (*Rubus strigosus*,) upon which were large knobby tumors, technically termed "galls," i. e., vegetable swellings or excrescences caused by the punctures of insects. And almost every year I have noticed an occasional instance of the same tumors on the raspberries in my own vicinity. From them I have uniformly obtained females only, of a particular kind of gall bee, no males, parasites or other insects being yielded by them.

In December last Edward Merritt, Esq., of Po'keepsie, forwarded to the Country Gentleman specimens of the Antwerp variety of the garden raspberry (*Rubus Idœus*) having excrescences upon them apparently of the same kind with those upon the wild raspberries. But whether they were really the same it was impossible for me to say, since instances are known in which galls which appear to be perfectly alike in their external form and internal structure produce different insects when growing upon plants or trees of different species, and even when growing on different parts of the same tree. I have therefore deferred replying to Mr. M.'s inquiry until I could breed the insects from the galls he sent. Kept in a warm room, and occasionally moistened, I expected the insects would have come out from one of these galls much sooner than they have done. It is evident that a warm temperature does not accelerate the growth of the gall bees (*Cyniphides*) as greatly as it does the gall flies (*Cecidomyides.*) It was not till the fore part of April that the insects began to make their exit from the gall, and down to this date thirty individuals have come forth, which are probably all that will be disclosed, as no new ones have appeared for a week past. The insect proves to be the same as that which infests the wild raspberry, and appears to be a species not yet noticed in scientific works. I therefore present such a description of these galls and the insect which produces them, as will serve to identify it hereafter.

In these galls a portion of the stalk of the raspberry is swollen into a large irregular excrescence, often two inches long and half an inch to an inch in thickness, resembling a potato, though smaller and less fully developed examples are common, these being more knotty and frequently appearing like a cluster of grapes that have grown together. Their color is the same as that of the stalks, being in the wild raspberry cinnamon brown after the leaves have fallen, and sometimes a kind of bloom of a sky blue color may be seen upon them, particularly in the creases and other depressed portions of the surface. Prickles like those of the stalks also grow in places upon them. Internally these galls are composed of a soft pith-like substance of a pale yellowish color, and in this, here and there, are curved and distorted streaks of a harder, white, woody substance. Numerous round cavities or cells occur in this soft pith, the sides of which are not hard as they usually are in the cells of other galls. And in each of these cells there lies during the winter season a small white maggot, soft and shining, bent into the form of a crescent, having no feet, and making no attempts to move.

About the beginning of May these maggots become changed into shining black four-winged flies, resembling small bees, which gnaw their way out of the galls, whereby the latter become perforated with holes the size of a large coarse pin, their diameter being about five-hundredths of an inch. I have sometimes noticed some of the holes in these galls to be much smaller, only half the usual size, whence I infer there is a smaller insect, probably a parasitic destroyer of this gall bee which comes from these galls, and which I have never yet obtained.

This insect pertains to the family Cynipidæ and the order Hymenoptera. The female in having the antennæ but thirteen jointed and perceptibly though very slightly thicker at each end than in the middle, and in having the the basal segment of the abdomen not disproportionately longer than the others, will pertain to the genus *Figites*, and I had named this species in my cabinet the raspberry stalk gall bee, *Figites Rubus-caulis*. Its body is one-tenth of an inch long, black and polished, with the legs, antennæ and mouth dull pale yellow. Its wings are transparent though not clear and glossy, and they have a smoky spot bordering the second transverse vein on its hind side, this vein being twice as thick as either of the other veins.

These insects are slow in their movements. I have not seen them attempt to run, to skip, or to fly. They merely walk at a moderate pace, crawling up the stalk or other surface on which they are placed, with their antennæ extended out horizontally in front, and waving up and down, the tips each moment touching the surface, as if examining the path before them. And if menaced with danger, they instantly drop to the ground, and there lie still for a short time, as though they were dead.

In addition to these galls Mr. Merritt also sent some raspberry stalks showing wounds of a peculiar character. A row of small holes is perforated lengthwise of the stalk, causing it to crack open, exposing the central pith, in which a row of glossy eggs is seen, one having been inserted into each hole at the time it was bored. Mr. M. states that these wounds are very numerous, nearly a quarter of the raspberry stalks showing them, and that he has seen the same wounds in grapevines. I find the wild raspberries in my own neighborhood are also wounded in this manner, and I have heretofore seen the same wounds in the twigs of willow. Notice has recently been attracted to these wounds also occurring in the twigs of cherry trees in the vicinity of Newark, N. J. See Co. Gent. of April 24th, page 272. In the year 1858 the twigs of the apple trees at Akron, Ohio, were extensively injured in some orchards in this same manner, whence H. W. Howe, Esq., Counsellor at Law, of that place, was induced to watch this phenomenon closely, and at length he detected the culprit *flagrante delicto*—in the very act of piercing these holes. It was from the specimens which he thereupon transmitted to me that I know the insect which makes these wounds. It is the Buffalo tree hopper, *Ceresa bubalus* of Fabricius, which is figured and briefly described in my Third Report on Noxious Insects, Transactions State Ag. Society 1856, page 335. This insect has such a peculiar form that it has probably been noticed at some time by every person. It is of a pale grass green color, and is shaped like a beech nut, with short, sharp-pointed horns jutting out in front on each side, and when approached by the finger, with a sudden strong spring it darts away, and is lost to view. I have recently forwarded to the American Agriculturist an account of this insect, to which I must refer any one who desires more full information respecting it than can here be presented at this time.

It is scarcely necessary for me to add that when either of these insects now spoken of invade our gardens they may readily be subdued by cutting off and burning the affected portions of the raspberry stalks in the winter or early part of the spring. Asa Fitch. *Salem, N. Y.*

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Stock for Canada.—The Helen Douglas of Annan, Capt. Maxwell, sailed from Annan Water-foot for Quebec, on Monday last, and had on board the following stock, which has been purchased in this country by Mr. Simon Beattie of Markham, C. W., a native of this place:—An entire thoroughbred horse, called Young Irish Bird-catcher, late The Heir, by Grey Plover, son of Irish Birdcatcher—dam by Caronna out of Repartee; 2 Short-Horn heifers, and 2 bull calves, purchased from a good stock near Lesmahagow; 40 Leicester and Lincolnshire sheep selected from one of the best flocks in Lincolnshire; 2 sows and 1 boar from Yorkshire; and poultry, dogs, &c. The horse was purchased by Mr. Beattie in Ireland.—*Annan* (*Scotland*) *Observer.*

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co.---No. VII.

The Shady Side.

I have endeavored, as far as practicable, in former communications, to portray such features in the systems of farm management in this county as appeared to be worthy of more general adoption not only *there*, but in other localities; and as I conclude my notes in this county, if I happen to give some of the slipshod farmers a thrust, they need not blame my pen—they should not obstruct the course with their bad management.

In almost every neighborhood I met with lots of farmers whose systems of farm management from year to year are *decidedly bad*—bad for their own revenue—bad for the stock of all kinds—exerting a bad influence on their own and the feelings of their families—*very* bad for the fertility of their farms, and bad for the country. Indeed, I visited many very fine farms on which the system of management with stock of all kinds, and the soil, instead of being such as to merely keep from deteriorating, was annually on the retrograde. Others there are who by neglecting to adopt a better system of husbandry, lose enough right out—directly and indirectly—to pay hired help for cultivating their farms in a most thorough and farmer-like manner, and at the same time keep their farms improving in fertility, and return them more clean cash, from year to year, than they now receive with all their hard labor and close calculations in their farm and family expenditures. It may appear to many to be a random and thoughtless remark, but it has appeared to my own mind that enough is annually wasted in this county, and lost, by neglecting to employ the means which are at hand to secure it, to pay for the thorough cultivation of all the tillable soil of the county.

Here is a young farmer who has but just commenced farming operations. He has a good farm, to appearance, of about 50 acres, and has just erected a good commodious barn on a substantial stone foundation, and a neat little cottage assures us that he has consulted his purse and economy in erecting his buildings, as far as would be practicable. There is some good taste manifested in the arrangement of the buildings, although his buildings are standing in a twenty acre field, because he cannot find time to erect any yard fences himself, nor get forehanded enough to hire them built. He labors at a very great inconvenience when hauling in his crops for want of a man or boy to load and mow his grain. He assures us that he cannot afford to hire help, because it will take too large a share of the profits of the farm.

His grain stands thin on the ground, and the yield per acre is small; but the soil appears to be very good, *naturally*, and he wonders why he is not able to raise as good crops as some of his neighbors, whose soil is not naturally as good as his. We know what the difficulty is —the soil has not been manured for a long succession of years. Let us propound a few questions to him as we move along towards his stercorary.

Do you make much manure? "Yes, I feed out most of my coarse grain on the farm, and none of my hay and straw is sold off the farm. I have a good lot of swine, now being fattened, which I calculate will consume my crop of peas and crop of Indian corn." All correct so far; but let us see how well it has been carried out in his system of farm management.

Here is a temporary shanty for a barn and stable, with the manure of two or three years all around it going to waste; and not a single load has been hauled out on the fields! Here are some 14 or 15 swine being fattened, and their pen and yard is on the verge of a stream of water, which sweeps away nearly all their manure to the river.

His Indian corn is not half as good as it would have been had he applied a good coat of manure to the soil. But he says he could not get time to haul out any manure, and so he planted his corn *without* manure. Tall pig weeds lift up their heads as high as the corn, and large rag weeds cover almost the entire soil, which rob the corn of the little nourishment that is left in the soil.

He feels a little rebuked at such things, and apologizes by saying: "One man cannot do everything on a farm. Haying and harvest came on too soon, and I was obliged to neglect cultivating my corn the second time. Therefore this will account for my premium weeds."

What are you experimenting with in that field? we inquired, where nothing but noxious weeds from three to four feet high could be seen.

"I sowed peas in that field, but for some reason they appear to be almost a failure."

Meadows appear impoverished, and yield but little hay, and pastures afford but a scant supply of grass, and he assures us that "farming is hard uphill business, and pays poorly enough."

A Renovating System Suggested.

The foregoing picture is one of very frequent occurrence. And now, seeing that we have found such a system of farm management to be faulty, we will suggest how it may be improved so that farming will pay better.

In the first place the manure must be applied to the soil annually, at least.

It is utterly useless to be economical of the productions of the farm, and convert them into manure, unless that manure is economically saved and judiciously applied to the soil. It impoverishes not only one field, but the entire farm to allow the manure to all be wasted about the barn and yards, just as much as it does to sell or allow everything that is produced on it to be carried off it, while nothing is returned to the soil to compensate for what one or more crops have exhausted it.

In the next place, a farmer on fifty acres of land needs a good hand constantly, or most of the time, at least. The labors of the farm at some seasons of the year all seem to require attention within a short period of time. But if they are not attended to in good time, it will be too late, and therefore loss will be the certain result.

Now, if this young farmer, to whom allusion has been made, had employed a good hand by the month or by the day, even at one dollar per day, and collected and saved, and hauled out all his manure in good time, and applied it to his corn crop, and had employed suitable help to cultivate and hoe his corn, and to keep the soil mellow and clean, every good farmer will acknowledge that his field would have produced two bushels of grain where he now gets but one, besides keeping the soil in a good condition, so that the next crop would be abundant, and there would be no deterioration of the soil. It is true there might be many days of unpleasant weather when a hand could not earn even his board; but if all the plans connected with the farm were well arranged, there would be some job on hand in the workshop or woodhouse, or barn, at which a faithful man could labor to good advantage.

So with other crops; if suitable help had been employed at proper times to prepare the soil, to get in the seed, to harvest and secure them, and the leisure days spent in making compost and in draining those wet portions of some of the fields where not half a crop can grow on account of too much water, a renovating system of farm management would have been instituted at once, and crops of all kinds would be in some fields more than doubled, and the cash value of the farm greatly increased, and the proprietor would not only have more clean cash for *his own* services after paying his laborers, but would have the satisfaction of seeing better crops grow on his farm from year to year, and he would *feel* better, and act better, and would actually be a better citizen, and would be more highly respected, not only by others, but by his own self and family.

Obstructing the Highway.

Here we pass a beautiful farm, and the fresh, thick grass, destitution of noxious weeds, and the smoothness of the fields assure us that field culture is well performed, and we are about to enrol the proprietor's name among the enterprising and successful farmers. But as we approach the residence and outbuildings, which latter are on a line with the highway, we drop our pencil and grasp both lines, in order, if possible, to run the blockade without being capsized while passing along this gentleman's front barnyard. It is surely a spacious one! It extends from Lake Erie on the west to the Hudson river. But we would have no objections to that feature were the entire surface covered a foot deep with good manure. But when they come to collect the manure in this yard they find that it has been spread out over such a vast surface it is by no means a practicable job to collect even one-quarter of it.

Drive carefully and straight, for there is lots of rubbish! Every tool and implement is securely housed beneath the broad canopy of heaven. There are plows, three and two are five, and one tumbled almost into the beaten track; and there is an old ox-sled which to appearance has been carelessly left on one side of the way, as a remembrance of grandpa, one of the pioneers of the county, and here are old cultivators, several harrows, a roller, half rotten, horse rakes, hay riggings, a mower and reaper, wagons and other farm implements, in most complete *dis*order. Did it not cost so much to engrave such pictures, we would forward a pencil sketch to the artist, for insertion in the CULTIVATOR and Co. GENT. What a disfiguring blotch on this fine farm!

This picture is no uncommon one, for I saw scores of such spacious tool houses or apartments. It is very convenient to unhitch from a wagon or cart, and leave it on one side of the highway; but if a man will once make up his mind to have every tool and implement securely housed, he will always find it just as convenient to keep the highway unobstructed with agricultural tools and implements, and to have them all safely and securely housed when they are not in use. It is folly to plead anything in extenuation of the thriftless and *un*farmer-like, practice of obstructing the highway with tools and implements.

Want of Thorough Draining.

Notwithstanding nature has provided for the drainage of a large proportion of the soil of Monroe county, still there are very many fields which hardly pay the expense of cultivation, because there is such an abundance of surplus water. I noticed very many fields of summer fallow that were almost nothing but *lumps*, LUMPS, LUMPS; and in many places I saw farmers cross-plowing in September, when water would follow them in the furrows for several rods, and the furrow slices reminded us of huge slices of putty. It seems truly surprising that any one who has ever *heard* of the advantages and benefits of thorough underdraining should be so slow to improve his soil, so as to raise, in many instances, more than twice as large crops of any kind of grain or grass as can possibly grow without draining. I saw hundreds of acres of choice land, most pleasantly located, which did not pay the interest of three per cent., because it was too wet, but which undoubtedly would pay the expense of draining in the increase of the two first crops, and at the same time would require far less team labor and human labor to cultivate it if it were drained as it should be. In my next I shall speak of the agriculture of the Tuscarora Indians in Niagara Co. S. EDWARDS TODD.

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SANDWICH ISLANDS.—We receive our exchanges from the Sandwich Islands as regularly as those from California. The *Pacific Com. Advertiser* of the 6th of March, says—"The bark R. W. Wood brought from Germany six fine pure-blooded Merino rams, all of which appear to be in the best condition, and are noble looking animals. These added to the late importation from Germany, will be an acquisition to our islands, and must result in greatly improving our wool, which is becoming a noticeable item of export." The same paper states that "the Emperor of France has added another testimonial of his respect for our Sovereign," by presenting to him four picked rams from the royal flock at Rambouillet, which are now on their way to Honolulu.

DOUBLE CROPS.

MESSRS. EDITORS—Having noticed much of late in the COUNTRY GENTLEMAN, about raising two or more crops upon the same ground at the same time, and believing it to be a practice of very doubtful utility, I am desirous of saying a word. And first, let me say my own experience has chiefly been confined to a few attempts at raising corn and turnips together. The invariable result has been this—no turnips. Now when I reflect that the combined action of different things is requisite for vegetable growth, I am not surprised. The turnips were deprived of at least two positive essentials to all vegetable growth, viz: light and air. If the corn had been planted six feet apart instead of 3½ feet, a fair crop of turnips would undoubtedly have been the result—that is, one half the ground in turnips and the other half in corn, one half of a crop of each would have resulted. In fact, have known a man to plant his corn five feet apart one way and then plant potatoes between the rows, the utility of which I have never been able to discover. The practice is very common in this section, of raising pumpkins with corn, but I believe if experiments were tried, this would be found to be poor policy. One thing I am certain of, is, if pumpkins were raised by themselves, so that they could have plenty of sun and air, they would contain much more nutriment and ripen much earlier. On the whole, is it not much better to raise one crop at a time on a field and not attempt to produce two, at a greater expense of cultivation and get but a half of each? G.

Livonia, N. Y.

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[For the Country Gentleman and Cultivator.]

NEW SOILS.

It is a general impression in this vicinity, that new soils are far preferable for certain varieties of crops and roots, to old ones, and without doubt this is true; and that the cause of this superiority is certain chemical qualities which new soils contain to a greater extent than old ones. In digging a drain recently, in a lot which had been cleared perhaps eight or ten years, I came to the conclusion that it was not altogether owing to the qualities of the soil, but in a degree to the more porous condition of the soil, as I noticed every root and rootlet forms a natural drain from the surface to the under stratas of the soil, the roots being almost wholly decayed. All these arteries or pores were partially filled with water, and through these the surface was being quickly dried off. Of course, as the soil is worked and becomes older, these channels become filled up, making the soil late and cold, when it becomes necessary to drain. Does not this afford ample proof that draining pays? E. A. KING.

King's Ferry, N. Y.

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[For the Country Gentleman and Cultivator.]

THE BUCKWHEAT QUESTION.

I learned when a boy that corn did not do well after buckwheat, but am confident the exhaustion of the soil is not the difficulty. That there is trouble somewhere there is no doubt. I incline to think that there is a poison about it for corn. The reason why I think it is not more exhausting than other crops, is that wheat or oats grow good on the same ground the next year after the buckwheat is taken off. On our new and strong prairie soils, you have no difficulty in telling where the buckwheat was grown by the appearance of the corn, especially the first part of the season.

I have known a number of crops of buckwheat to be grown in succession on the same piece of land, and give good returns each year. Mr. H. D. MAY, a man that looks into the whys and wherefores of things as much as any man among us, says that the chinch bug will not touch wheat that is sown on buckwheat ground at all.

Belvidere, Ill. A. MOSS.

THE CULTIVATOR.

ALBANY, N. Y., JUNE, 1862.

☞ The New-York State Fair is to be held at Rochester, Sept. 30—Oct 4, upon the Show Grounds of the County Society, within two miles of the Court House.

The State Fair at Rochester.—The Rochester *Union* of April 30, remarks with regard to the preparations now making in that city for the holding of the next Fair:

"The buildings are not to be mere shanties, but permanent and useful structures, costing some five or six thousand dollars. The State Society has never had suitable buildings for an exhibition, and after holding one here in such, it would be strange if it did not change its policy and hold its annual shows only where such buildings can be found. This may eventuate in the locating of Fairs at three or four points in the State, of which Rochester will, of course, be one. The buildings to be erected for the show this fall will be pretty sure to be used again by the State Society in the course of three or four years, and they will be used every year by the County Society. Let all who have an interest in the holding of Fairs here bear these facts in mind, and contribute liberally now to make a good thing for the city in the future.

☞ A visit at Rochester May 8th, confirmed for the most part the representations we have had heretofore as to the good prospect of the Winter Grain, as a general thing, in Western New-York. Spring crops seemed to have been put in, and, although behind-hand, are not too late to afford fair returns should the remainder of the season prove favorable. The fruit prospect is apparently unusually good—particularly for Peaches.

Our foreign intelligence, received during the past week, is not favorable for the crops in England or France. In the former country, the statements given in our last, remain mainly applicable to subsequent weather. The *Mark Lane Express* of April 21, one week later, reports little improvement in the prospect, and a slight rise in the price of Wheat, with the remark "that the harvests of 1860 and 1861 were seriously deficient, and that the present year will want very large supplies, the extent of which must depend on the time of gathering." In France, there has been a sudden change in the state of the crops, quite disappointing hopes previously entertained. The *Journal d'Agriculture Pratique* of April 20, accompanies the crop reports of its correspondents with the following remarks, which we translate for the Co. Gent.:—"A season prematurely early gave vegetation an extraordinary start. Then a cold turn, very severe for the season, supervened about the 12th of April; the frosts cutting off the young shoots of the plants and hazarding everything that was too far advanced. * * After three nights of successive frosts, the fruit crop, above all that of pears, is compromised, as well as that of the vine, the mulberry, colza, rye, and luzerne, while the wheat is also injured in some measure. It would be premature to endeavor to estimate the extent of the calamity. The rural population have often been alarmed at frosts, which nevertheless only caused disorders in vegetation, repaired by propitious weather at a later date."

☞ We are indebted to Mr. C. B. Miller, Proprietor of the Horticultural Agency, 29 Broadway, New-York, for a fine specimen of each of the following plants: The new double seedling Petunia, "*Gen. McClellan*—the best double yet produced, and for which the Brooklyn Horticultural Society has just awarded a special premium; raised by John Cadness, Flushing, L. I.—and of *Daphne Cneorum*, said to be the best hardy evergreen plant, free flowering and very fragrant, for which also a special premium was awarded to A. G. Burgess, East New-York, L. I." The McClellan Petunia is the finest thing of its kind we have seen. The Daphne is not yet in bloom, but will doubtless vindicate the correctness of all that Mr. Miller says in its praise. We commend both to the attention of our florist readers, and Mr. M. will please accept thanks for affording us, by his kind attention, the opportunity of doing so understandingly.

☞ The frequency with which we receive such assurances as the following, with respect to the Results of Advertising in The Country Gentleman, must be our apology for occasionally asking the attention to them, of Advertisers who wish to reach the Agricultural Community. Many of our Advertising friends who have written us to the same effect, or verbally asserted the same facts, and who have never seen any publication in our columns of their assurances,—can bear us witness that it is only a very few such letters, out of the number we receive, which we do lay before the public.

The letter from which the extract below is taken, comes from a firm who have for many years been constantly advertising in our columns. They say: "We are very well satisfied with our advertising in the *Country Gentleman.* We do not wish to underrate other papers, *but in truth and justice we are bound to say, after advertising in* AT LEAST ONE DOZEN AGRICULTURAL PAPERS, *that our advertising in the Country Gentleman would bring us more custom* THAN ALL THE REST."

Manufacturers and dealers in Agricultural Implements, Nurserymen, Breeders of Improved Stock, and others, would consult their own interests, as it seems to us, by keeping the character of their business somewhat more constantly before the Agricultural public. We are constantly obliged to reply to inquiries from our readers, either privately or in print, which ought by good rights to meet with constant answer in our Advertising Columns.

Terms of Advertising in the Country Gentleman.

One Dollar per square of 10 lines' space, or less. each insertion.

Brief Business Cards, to be kept standing for a period of not less than Six Months, will also be inserted on favorable terms, according to the number of lines occupied.

Buckwheat and Wire-Worms.—A. G. Percy, in the Rural New-Yorker, states that he planted corn on land infested with wire-worms, dressing it with a barrel of ashes and lime per acre, after planting, to keep them off. When the corn was four to six inches high, the worms began to work, and in two weeks destroyed every hill. On the 28th of June he sowed the land to buckwheat, with a strip of corn through the same, to test the worms. He could see no difference in the quantity eaten; they eat from one-half to one-fourth of both corn and buckwheat. Winter wheat was the next crop; this was almost entirely destroyed. Oats followed, and gave a very heavy crop, entirely free from their ravages as far as he could discover. Mr. Percy remarks:—"The reason why there is obtained a fair crop of buckwheat on such land many times, is because said wheat is a very quick growing plant, and the worms get their living on the green roots of the grass which has been inverted but a short time."

☞ Mr. G. W. Marsh of Gaylordsville, Conn., sends us a specimen of the Mole Trap illustrated and advertised in other columns of this paper. If the Moles get caught in it, with as much promptness as we got our fingers pinched, it is a contrivance that can be recommended for great simplicity and efficiency.

☞ The Ohio State Fair this year is to take place at the city of Cleveland, Sept. 16–20. T. C. Jones, Esq., of Delaware, O., is President of the State Board; John H. Klippart, Columbus, Secretary.

☞ Hon. B. P. Johnson, United States Commissioner to the Great International Exhibition at London, is to sail in the steamer City of Baltimore, from New-York, May 31. Although Congress failed to make the appropriation asked for to assist American exhibitors on this occasion, which, if granted, would have enabled us to take an honorable and gratifying position among the other nations there represented,—a few of our manufacturers, inventors and artists have had the enterprise to incur the formidable outlay required, for themselves; and Col. Johnson will be present, as the authorized representative of the United States Government, to promote their interests and superintend the management of their contributions. We are glad to know that there will thus be a delegate from this country officially in attendance, since, as some of our citizens are present as exhibitors, they might be placed in an unpleasant position for the lack of any properly constituted medium of access to the Managers of the Exhibition and the English government, and since, moreover, the circumstances of the case afford so ample evidence that the public spirit of individuals is none the less active here because the time and means of the government are wholly engrossed by the "weightier matters" that now press upon their attention.

Col. Johnson's address will be in the care of Mr. W. V. Morgan, Arundel-street, Strand, London, W. C., (post-paid.)

Hon. E. Cornell, President of the State Agricultural Society, has also taken passage for the 31st inst. We bespeak, both for him and for Col. Johnson, the kind attentions of our Agricultural friends in Great Britain, and trust that among the other engagements and duties of the coming months, they may have the time to visit some of the more prominent farms and herds in England, Scotland and Ireland.

It is expected that Col. Johnson will return about the middle of September. As to the affairs of the State Society in the meantime, we copy the following paragraph from the number of Society's *Journal* just issued:—

"During his absence, Mr. S. R. Earls, Assistant in the Secretary's Office, will attend to the duties of the office, assisted by Mr. John Harold, Secretary of the Queens County Agricultural Society and General Superintendent for the Fair of the Society. Dr. Herman Wendell, Vice President, and Luther H. Tucker, Esq., Treasurer, have kindly consented to give their counsel and aid as may be desired; and other members of the Executive Committee have also proffered their services if called for. A committee consisting of Ex-President Geddes, P. Barry, Vice President, T. C. Peters and E. Sherrill of the Executive Committee, have been appointed to superintend all the erections and all the arrangements for the annual exhibition.

"All communications on the business of the Society may be addressed to the Secretary, Agricultural Rooms, Albany, as heretofore."

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☞ S. N. Goodale of Cleveland, O., in his Wool Circular for May, says:—"I hear of many lots in Ohio being contracted at prices ranging from forty to fifty cents, which would make them average forty five cents. I presume at these prices sellers will not look for a better market, as it is plain to see prices may be lower before they are higher. The State Agricultural Board have very generously offered eighty dollars in first premiums on wool, and less amounts in second and third premiums, at the Fair to be held in this city from the 16th to 19th of September next. Wool husbanding has heretofore been much neglected, and it is to be hoped that wool-growers throughout the United States and Canadas, will respond by sending samples of their flocks. Any number desirable may be sent to my care, though not less than twenty fleeces of any one class of wools, may be entitled to premiums. The first class will consist of Felting, which usually embraces the finest Saxony and Silesian, with other grades; second, Delaine Wools; third, Cassimere Wools; fourth, Combing Wools."

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California.—A bill has been introduced into the Senate of California, for the "Encouragement of Agriculture and Manufactures," which appropriates the handsome sum of Eighty-four Thousand Dollars, to be paid in prizes for the introduction mainly, of new branches of cultivation—for instance, $1,000 for the first 10,000 lbs. sugar from Sorghum—$1,000 each for the same amount of sugar from the sugar cane and sugar beet—$3,000 for 1000 bales flax—$5,000 for 1000 bales cotton—$1,000 for 1000 bales tobacco—$1,000 for 1000 bales hops—$5,000 for 100 bales raw silk—and similar prizes for tea, coffee, rice, &c. Prizes of equal amount are offered for manufactures of cotton drilling, "burlaps," suitable for grain and wool sacks, calico, shirting, sheeting, broadcloth, &c. &c.

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☞ The Franklin Co., Mass., Ag. Society, have raised over $20,000 to purchase more land for the enlargement of their Show Grounds at Greenfield, after which purchase they will own ten acres; and it is proposed, during the next Exhibition, to dedicate the field by appropriate exercises, for the purposes of the Society, and as an Agricultural Park.

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☞ The Queens Co. Ag. Society is to hold its next Annual Exhibition (the 21st) at the Fashion Pleasure Grounds, in the town of Newtown, on Thursday and Friday, 18th and 19th of September. The Premium List has been much enlarged, and the show continues for two days, instead of only one as heretofore.

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☞ It is stated that there has been sent from Vancouver's Island a pine spar of no less than 230 feet in length, to the International Exhibition, and that it will be erected in the grounds of the Royal Horticultural Society's Garden, to remain as a specimen of the arboricultural productions of that Island.

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Water in Barn-Yards. — For twenty-five years I watered my cattle at a stream of water about ten rods from my yard. Six years since I dug a well about twenty rods from the barn, and brought the water in lead pipe to the yard. It has run ever since, and I think now that I could not do without it. It will almost pay expense in a single year. J. S. Y.

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Matching Steers' Horns.—S. C. Parsons, of New Boston, Mass., writes to the *N. E. Farmer*, that "the horns of steers while growing can be turned in any direction, by the continued use of a weight over a pulley, with very little trouble, and no injury to the steers." He used a two pound weight, passing a cord from the point of the horn to a pulley over head, and thence to another pulley where the weight would hang out of the way, during the time the steer was stabled one winter, and brought up the lopped horn like the other. Others tried the same plan with equal success.

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The South-Downs Invading Spain.—We cut the following paragraph from the last number of the London Mark-Lane Express:—"Several South-Down shearling ewes and two shearling rams are about to be sent, from Lord Walsingham's flock at Merton, to Spain. It is strange to see the South-Down introduced into the headquarters of the Merino, but probably the Spaniards have discovered that there is nothing to be compared to a good cut of South-Down mutton."

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The Country Gentleman.—I always do all in my power to procure you new subscribers, as I consider your paper by far the best agricultural journal published in the country. E. R. A. *West Roxbury, Mass., Jan.* 16.

The Agricultural College of Pennsylvania.—Dr. **Evan Pugh**, President of this Institution, sends us the published report of the proceedings at a meeting of the Board of Trustees at Harrisburg, May 6. "Reports from standing committees showed that the affairs of the institution were in a prosperous condition, and measures were taken to secure a full statement of the financial affairs of the college, together with a history of the latter, from its origin to the present time, in order that, by their publication, the people of the State may learn by what means this State has succeeded in founding a flourishing Agricultural College, which is nearly filled to its utmost capacity, notwithstanding the disturbed state of the times, while all other attempts of a similar character have failed in this country.

"Among other things, a resolution of the board approved the action of the executive committee in applying to the last court of Centre county for a change of the corporate title of the institution, the Farmers' High School of Pennsylvania, to that of the *Agricultural College of Pennsylvania*, by which title the college will hereafter be designated—the reason for this change being that the latter name more properly represents the course of studies pursued in the institution, and associates it more intimately with agricultural institutions of the same grade in other countries, than does the former title. European farm schools are all of a very low order, whereas the course of study at this college is more extensive than at any of the European agricultural colleges."

Improved Stock in Western New-York.—Among the late sales of Short-Horned cattle by **Jas. O. Sheldon**, Esq., of White Springs Farm, Geneva, alluded to recently in the columns of the **Country Gentleman**, are the following, to different parts of Western New-York:

The Duke of Oxford, by 2d Grand Duke (12961,) out of Oxford 20th; sold to **Charles A. Gardiner**, Esq. of Rochester. We understand that Mr. **Gardiner**'s object in the purchase of this bull, is mainly to promote as best he can, the improvement of the stock of his vicinity. It is to be hoped that the public spirit thus displayed may meet with the hearty co-operation of those whom it is to benefit.

2d Grand Duke of Oxford, by Grand Duke of Oxford (16184,) out of Gloster's Oxford, together with four females, to **James S. McCall**, Esq., of Lyons, Wayne Co. Mr. McC. has just purchased a fine farm of 210 acres, and has procured these animals from Mr. **Sheldon** as the beginning of what he intends to be a first class herd. The good judgment displayed in his selections, together with the excellent character of his farm, and his own knowledge of, and fondness for Short-Horns, are such as to promise him a high degree of success.

Seneca, and a two-year old bull by the Duke of Gloster (11382,) out of "Josephine," to **George A. Downing**, Esq., of Palmyra.

Premier, a yearling by the Duke of Gloster (11382,) to Messrs. **Morgan & Brothers** of Kiantone, Chautauqua county.

The above animals are all good ones, and from their promise and breeding must prove of great benefit to the neighborhoods where they go.

Wool-Growing in California.—**S. W. Jewett**, formerly of Vermont, writes to us from California, that his "sons clipt from their flock last year, over 18,000 lbs. of wool; this year it will be somewhat larger, as their increase amounts to over 4,000 a year. They are in a fine grazing country, where there is no winter to prevent the green feed from growing luxuriantly; in that section there are no burrs to injure the value of the fleece. The sheep grow so large and fat that three-quarter Merinoes will yield six pounds of wool per head. Their flock now, of old and young, amounts to over 12,000."

Gage Plums.—Prof. **Renwick** is reported to have said, at the meeting of the Farmer's Club of the American Institute last week:

> "It is a disgrace to the American horticulturists that they have not improved to a greater extent American fruits and flowers. Many of the native fruits of this country have been taken to Europe, and after being greatly improved by cultivation, returned to us. This is the case with the Gage plums, which take their names from Gen. Gage, who carried the original stock from this country to England. There are doubtless still great numbers of wild fruits and flowers of America. The Schuyler Gage plum, now very much esteemed, comes from wild stock growing on the Susquehanna river. Cherries grow wild and neglected."

One who undertakes to enlighten the public, should possess some slight knowledge of the subject about which he talks. The Green Gage plum alluded to by Prof. R., so far from being carried from this country to Europe, has been grown in France for more than three hundred years, it having been introduced into that country in the time of Francis I, from whose wife it received the name of Reine Claude. The Schuyler Gage, said to have "come from wild stock growing on the Susquehanna river," is a seedling of the Green Gage, which originated in the garden of Gen. Schuyler of revolutionary memory, in this city.

Medium or Small Clover.—A. B. Benham of Tompkins Co., who took the first premium on grain farms in in 1860, remarks as follows in favor of the medium clover over the large kind grown by some farmers:—"1st. The hay is of much better quality. 2d. The two crops can be secured at a season of the year not to infringe on our wheat harvest or our timothy haying, or the harvest of any of our summer grains. 3d, and most important of all reasons—By cutting it twice the same season, there is but very few of the noxious weeds that are so fast overrunning our lands, will mature seeds as soon as the clover seed; and this we may always rely upon, we are less liable to have small seeds in the medium variety." Mr. B. cuts the first crop about the last of June, and cures it nicely, making hay of excellent quality; the next crop is generally taken off in September for seed.

Roots of Clover.—The Seneca Falls Reveille of April 26, thus speaks:—"We have before us a head and root of clover brought to our office by Mr. **John Crowell** of our town, which was dug on his father's farm, and which is decidedly the biggest thing of the kind we have ever seen. The root was 7 feet 10 inches below the ground, and passed in going that distance through three different strata of soil. Mr. Crowell informed us that this was not the only one of the kind growing on the same ground, and rather intimated that with care in digging much longer ones might be found."

Top-Dressing.—A correspondent of the Boston Cultivator tried an experiment with top-dressing a meadow at three different times in the year. The first was applied early in autumn, when the manure was comparatively dry, and before rain. Another portion sometime afterwards, when the soil was soaked. A third, the following spring. The first portion produced double the crop, well filled with timothy and clover. The second, (applied later and after the rain) did not yield so well. That applied in spring produced little effect, except to increase the "spire grass" at bottom. He thinks the best time is soon after the hay has been cut; last summer he manured a gravelly knoll at that time, from which the timothy was rapidly disappearing. By late autumn, the timothy had outstripped all the other grasses, and was green and fresh, contrasting strongly with the dry red top and spear grass in other parts of the field. The manure was compost, made by spreading a foot of loam and muck under the barn, where the cows were yarded over night, and plowing it once in two weeks,—an obviously excellent and economical practice.

☞ The Susquehannah Valley Ag. Society holds its next Exhibition at Unadilla, Otsego Co., Sept. 23, 24. President, S. G. Cone; Secretary, R. W. Courtney.

Inquiries and Answers.

Worms in the Head of Sheep.—Our sheep have the grub in the head, and I wish to know the cause of it and a cure. M. Wagoner. *Harlemville, N. Y.* [The gad-fly, which causes this grub, lays its eggs in the nose during summer, and they hatch and pass up into the head. To prevent this result, smear the noses of the sheep with tar, (which insects dislike,) a few times, commencing before midsummer and extending into autumn. A good way to do it is to place the tar along a board or in a trough, and sprinkle salt over it. In eating the salt, the sheep get their noses capped with the tar. After the grubs have entered, expel them with tobacco smoke. Fill the bowl of a tobacco pipe half full and set fire to it. Place a strip of muslin over it, insert the tube or stem well up the nose, and blow through the bowl for a few seconds.]

Wool in the Stomach of Lambs.—I have lost several lambs within two or three days, and on examining them I find in their stomach, and in the intestines leading from it, lumps of matted wool (which I suppose they have eaten from the old sheep,) the size of a walnut to hen's egg. And also on their hind legs and rump a slimy substance. If you or any of your subscribers will inform me through the Co. Gent. or by letter, what I can do for my lambs to prevent their eating the wool, and what will help them after eating it, I shall consider you have done me a great favor. James Harroway. *Richmondville, N. Y.* [We have no personal knowledge of this disease, nor do we know a remedy—although we are informed it frequently occurs. Can our sheep farmers give a remedy?]

The Easy Washer.—Can you inform the undersigned where he can obtain the washing machine called the "Easy Washer?" It is spoken of as an excellent machine, and the cost but $5. John King. *Dubuque, Iowa.* [We cannot. Its makers would advance their interests by advertising it in this paper.]

"The Easy Washer."—Inquiries for this machine continue to come in. We can only repeat what we have heretofore said, that we do not know where it can be had.

Poultry Books.—You advertise some Poultry books. Please tell me if there is anything in either about hatching eggs by artificial heat, with the Author's price. Jas. Standish, jr. [In Bement's Poulterers Companion—price $1.25, you will find a full account of all the methods of hatching eggs artificially, with numerous illustrations. For sale at this office.]

Sorghum Syrup.—I hope you will give us all the information you can in regard to making syrup and sugar from the sugar cane. There were several hundred gallons made in and near this neighborhood in 1861, but we lack knowledge in regard to the manufacture of syrup and sugar too, particularly about clearing the syrup. A. L. *Monmouth Co., N. J.* [We shall be pleased to hear from any of our readers who can furnish reliable information in answer to A. L.]

Raising Pine Trees.—I am desirous of encircling my orchard with a strip of pines; can you inform me where I may get the seed, and when and in what manner I may plant them? The particulars through the columns of your valuable paper will greatly oblige a subscriber. N. *Nassau.* [The difficulty of raising young pines from seed under our hot suns, renders it cheaper to buy them of nurserymen, at small size, and by the 100 or 1,000. The Norway Spruce and Scotch pine are most easily and cheaply obtained, transplant easily, and grow vigorously.]

Stump Puller.—Can you inform me where I can get a machine for pulling out stumps? What is the most approved patent, if there are more than one? At what price can one be furnished? Any information you may be able to furnish me in reference to this matter, will be thankfully received. J. L. *Newton, N. J.* [Our correspondent had better address J. A. Nash, 37 Park Row, New-York, who will furnish him all the information he desires on this subject.]

Remedy for Sheep Ticks.—We may state in answer to an inquiry, that Arms & Co. of Boston, keep for sale an extract of tobacco, which Mr. J. S. Grennell of Greenfield, says is the best thing he has "ever known to destroy vermin on cattle or sheep. It costs 75 cents per pound, and dissolved in water at the rate of an ounce and a quarter to a gallon of water makes a wash fatal to ticks. Lambs may be dipped in it, but for old sheep with heavy fleeces, I pour it on the back from an old tea or coffee pot, allowing a quart to each sheep, carefully parting the wool along the back. This will destroy a great many, so that they will go till shearing time. This extract of tobacco contains all the strength of the article, and is so convenient, so cheap and so effective that it should be in the hands of every farmer. Lambs should be thoroughly dipped about a fortnight after shearing, when the ticks will have left the old sheep for the more effectual shelter of lamb's wool."

Soiling Cattle.—Many of us farmers and fruit growers stand in need of much more stable and barn-yard manure. Our distance from the cities renders it impracticable to purchase it; so we are compelled to try and increase our stock of the home manufactured article. One of the first plans suggested is the system of soiling. We know that will increase the manure pile, but it has not been tried in this section, and we know of no instance of success. We would be glad to see detailed in the Country Gentleman some successful experiments by which bullocks have been kept healthy, and fattened into first rate beef—also successful dairy management under that system. Our doubts are only in regard to the health and comfort of the animals. We are satisfied that the manure will pay for the additional labor, and more. In this enterprising country the people generally adopt plans that are known to pay. If soiling is economical and practicable, why is it not more generally adopted? T. M. H. *Chester Co., Pa.* [Will some of our readers who have had experience in soiling, answer the above?]

Disease in Lambs.—In Co. Gent. of April 24, I notice the inquiry, "What ails my Lambs?" I wish to make the same—what ails my *Lambs?* I have lost several already, down dead. The glands of the throat are so enlarged as to compress the windpipe so that there is no air passage, and in some cases they never breathe. Upon opening the throat, the blood will be found to have settled there. The swollen glands form "bunches" under the throat; but in cases that live ten days they out-grow it. Some may linger along a few hours and then die—perhaps one day. Some three years since I lost several lambs in the same way; none of my neighbors had any cases similar. This year, I have heard several complain of loss of lambs. This day is the first that my sheep have been outside the yards, and only for a few hours to-day. Are other flocks thus afflicted? Do I keep my sheep too much confined, or feed too high, or not grain enough? My sheep are in *high condition.* J. J.

Steel Plows.—In answer to M. H. H.'s inquiry in regard to steel plows, I would say that they have been thoroughly tested in this vicinity, both upon the black sticking soils of the Mohawk Valley, and the cobble-stone upland adjacent, and they give very general satisfaction in both. I have worked and seen worked many of them, and have never known them to clog in any case. As to the durability of steel compared with iron points, very much depends on the temper given them. A steel point of good material and well hardened, will do about twice the labor of an ordinary cast iron one, but if not thoroughly hardened, is but little if any better than cast iron; but in any event he may rely on the earth rolling clean from steel in soil in which an iron plow would load very heavily. D. D. Devoe. *Ilion, N. Y.*

What is the Best Grass for Overflowed Lands.—A small portion of my farm, on the bank of the Mississippi, is subject to overflow from the river in times of high water—about once in each term of three or four years. The land is rich bottom land, and when the water overflows, it remains on the land generally from ten to twenty days. The land has never been cultivated, and I wish to get it seeded down to grass, suitable for early mowing and fall pasturing. Will you or some of your experienced readers, inform me what kind of grass seed (or a mixture of grass seeds,) is best for the purpose, (so as not to be much affected by the standing water, &c.,) the best time of year to sow the seed—whether to sow the seed with oats or other grain, &c.? D.

Muscatine, Iowa.

A Kicking Horse.—I want to inquire of your numerous readers about a horse which I have—a gelding about twelve years old, large size, and has been used quite steadily on my farm, well kept and worked. About one year ago last December, he commenced kicking in harness and stable, sometimes one foot and sometimes the other; the motion was quite similar to that of driving off flies, with generally a switching of the tail, and has continued to the present time. His health appears good. I wish to find the cause and the remedy, and if any of your numerous readers can inform me, it will be thankfully received. B.

Planting Nuts.—Tell your friend, Newton Ransom, if he will plant his nuts in the fall, they will germinate some time during the following season. If he wishes to plant them where he intends the future trees to stand, put two or three in one hill, and if more than one out of the number planted should germinate, they can be easily removed without injury to the one he wishes to leave for the future tree, if done as soon or soon after the plant makes its appearance above the ground. A Subscriber.

Poultry Book.—Where can I obtain a work on Poultry, with fine colored engravings of fowls, and the price of the work? C. B. [There was an edition of Bement's Poulterer's Companion issued with colored plates—price $2.50. We think however, that it is now out of print. C. M. Saxton, New-York, can probably furnish you with some foreign work on the subject, with colored illustrations.]

Works on Wine Making.—*J. E. M., Portsmouth, R. I.* There are English and French works on this subject, to which we cannot refer you in detail, and which could probably only be had by importing them on special order. Several American works on the culture of the Grape have chapters on this subject, as, for example, the latest, Phin's, just published by Saxton, New-York; but none of them arrive at anything like a treatise on the subject. The Patent Office Ag. Report for 1860 has one of the fullest essays on Wine Making we remember to have seen, of 37 pp., consisting mainly of translations from the recent and best foreign works. We can procure this book for you at a moderate price, if you cannot get it at home.

Wool and Bone Eating.—In number 20, vol. 19, page 316, 3d column, C. H. R., asks why sheep eat each other's wool; may it not be for the same reason that cows try to eat bones, described in vol. 18, pp. 140, 172, 236? Ask him to try salt with some and bone dust with others, and report the result to your paper. F. H. A. *Yates county.*

A Kicking Horse.—A case as described by inquirer B. in the Country Gentleman of May 8, happened to a horse of mine lately. He died suddenly, and proved to have the botts. Of course the best remedy for such a case is generally discovered when the animal is dead, which is said to consist in taking a good dose of blood from the horse and get him to drink it, being the food after which the botts are hunting, and which at the same time, acting as a physic, carries off the tormenting botts. This is not my own experience, but that of my neighbors, in whose advice I have reason to put faith. John. F. Hillman. *South Amboy, N. J.*

Steel Plows.—In Co. Gent. of May 8th, M. H. H., Onondaga Co., makes some inquiries about steel plows. I have used steel plows for the last 6 years, now manufactured by L. S. Sammons of this place; have used them on all kinds of soil, and have found no place where they will clog, if kept bright and clean and not allowed to rust. He wished to know how the steel point compared with the cast point. I have used both cast and steel points, and think that a steel point, if properly hardened, will last much longer than a cast point. I can plow 100 to 150 acres with the steel point, by having it sharpened two or three times. L. S. Standring.

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[For the Country Gentleman and Cultivator.]

Cost of Corn Crop in Massachusetts.

Messrs. Editors—I saw a statement in your Co. Gent. of April 17, referring to the cost of raising corn in New-York, and now I wish to show the cost of raising corn upon the hills of Western Massachusetts. The piece which I refer to, consisted of three acres, which had been mowed for three years previous. It required one yoke of oxen and a man and boy to plow it:

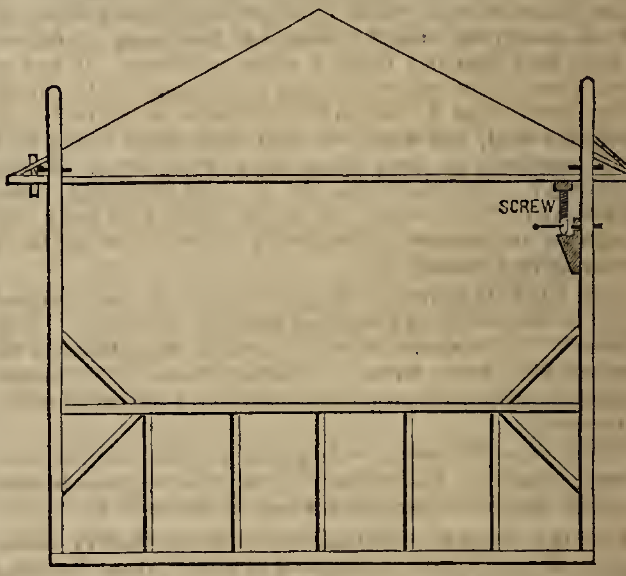
Three days work plowing and spreading manure,	$7.50
Three days drawing manure,	3.50
Harrowing,	2.00
Half day planting with machine,	1.00
Three pecks seed corn,	.75
Interest on land at $30,	6.30
Cultivating one way three times,	1.75
Eight days hoeing,	5.00
Two days cutting,	1.50
Husking and drawing corn and stalks,	8.00
Thirty loads manure,	15.00
Total cost,	$52.30
Cornstalks,	15.00
	$37.30

One hundred and sixty bushels of shelled corn at a cost of about 23 cents per bushel, showing that corn can be raised to some advantage upon the rocks of Western Massachusetts. H. H. P. *Shelburne, Mass.*

[For the Country Gentleman and Cultivator.]

CONSTRUCTION OF HAY BARRACKS.

The old fashioned barrack, as it is called, is built twenty feet square. Four posts of durable timber, twenty-two feet long, four feet to be inserted in the ground. The stick should be sufficiently large to square eight inches—the corners hewn off, making it partly octagon in shape—one and a half inch holes should be bored through the corners of each of these posts, one foot apart, for the bolts that support the roof. They should be made of one and a half inch iron, one feet in length, the outer four inches to be squared and turned up one inch, on which is laid a piece of joist, three feet long, to support the roof. The roof should run to a point from each side, and may be covered with shingle, tin, or thatched with straw.



There are four plates framed together, and braced. The posts pass up through the roof on the inside corners of the plates. The roof is elevated and lowered with a small screw of wood or iron, about two feet long. A wooden screw three inches in diameter will answer. This is used on the inside of the post. One man can raise and lower the roof if it is done as fast as the hay is put in or taken out. Raise each corner of the roof one foot at a time, going regularly around the barrack. The roof will not be likely to blow off, if the above directions are followed in building. The posts, as far as they enter the ground, may be left the full size of the stick.

The best way to build a barrack, is with sills and girts seven feet from the sills, and braced. You can fill it from the ground or hay poles on the girts, and have shelter under for sheep or cattle. I make a rough sketch of a frame barrack, side view, which is given above.

Millerton. J. D. KERLEY.

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[For the Country Gentleman and Cultivator.]

THE BEST WAY TO APPLY MANURE.

Twenty yards of manure can be put in the hills on an acre of corn ground easier than spread *evenly* over the surface. It will hinder the team longer, but save enough time in weeding to pay twice. I think it will increase the crop twice as much as if harrowed into the surface, or three times as much as when plowed under.

Sixty to eighty yards to an acre can be pretty well spread, easier than put in the hills. If harrowed into the surface, it *may* produce as good corn and leave the land in better condition for a subsequent crop. If plowed under, I doubt whether it will do either.

If you want reasons for my opinions I can give them. [Shall be glad to receive them.—Eds.] S. W. Coe.

Mantua Station, O.

HYDROPATHY IN THE GARDEN.

The title of a farm article in your journal of last week, suggests a few remarks concerning the use of water in the garden. There is no doubt that a great many people make much unnecessary work for themselves by watering their flowering plants when they do not need it. They seem to think that the moment the soil begins to look at all dry that they must begin to water, and out comes the watering-pot, and each plant receives a little dribble, moistening the surface of the ground and doing about as much good as to spit on the plant. Now it by no means follows that even if the soil be dry a couple of inches from the surface, that plants require watering, for well established plants have their roots running deeply into the ground, beyond the reach of harm from any ordinary drought. Very small plants newly set out, or young seedlings, may need moderate waterings every two or three days if the weather be dry.

Whenever it becomes necessary to water established plants, do it thoroughly, and give them such a soaking that they will not require another in a week. Frequent waterings harden the soil around plants, rendering it impervious to ordinary gentle showers and dews, and excluding the air from the roots. If the number of plants is not too great, it will be better to make a little trench around each one, pouring the water into that, and then drawing the soil over it. By this means your will avoid the caking of the soil consequent upon the ordinary manmanner of watering. G. B. H.

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YOUATT AND DADD ON CRIB-BITING.

Having a young and valuable horse, which has taken to the habit of late of cribbing, I write to inquire the cause and remedy. Will you or some of your correspondents report through the Co. Gent., and oblige A Reader.

Writers differ as to the cause, and have found no good remedy. Youatt thinks it is often the result of irritation; more frequently of idleness; and sometimes is caused by grooming the horses in the stables. He thinks the horse, in cribbing, draws in air and swallows it. Dadd, on the other hand, denies that an animal can ever *swallow* air alone. Youatt thinks it a serious defect, and constitutes unsoundness; Dadd thinks it only a habit or vice, and does not otherwise occasion any injury. Youatt says "the only remedy is a muzzle, with bars across the bottom sufficiently wide to enable the animal to pick up his corn, and to pull his hay, but not to grasp the edge of the manger. If this is worn for a considerable period, the horse may be tired of attempting what he cannot accomplish, and for a while forget the habit; but in a majority of cases the desire of crib-biting will return with the power of gratifying it." He says the desire of crib-biting will return with the power of gratifying it." He says other attempts have failed, such as lining with iron, smearing the edge of the manger with tar or aloes, or as some have proposed, turning out. He has seen a horse gallop across a field for the mere object of having a grip at a rail. Medicine is only thrown away. Dadd recommends that the space between the bottom of the hay-rack and the outer edge of the manger be boarded over, forming a steep inclined plane, leaving no edge on which the horse can fix his jaw. A slide is opened only at meal time. He rubs bar soap on the outside of the crib, as a preventive.

We give these views for what they are worth, and shall be glad if some of our readers can furnish something better.

[For the Country Gentleman and Cultivator.]

Making Apple Trees Bear Every Year.

Messrs. Editors—Many of the readers of the Country Gentleman, who have large apple orchards, have no doubt found it very unprofitable to wait for what is termed "the bearing year." I have noticed that from the excessive productiveness of this tree, it requires the intermediate year to recruit itself—to extract from the earth and atmosphere, the material to produce again. This it is unable to do unassisted by art, while it is loaded with fruit, and the intermediate year is lost. If, however, the tree is supplied with proper food, it will bear the next year; at least such has been the result of my experience and personal observation.

It is a fact well known to all, that the trees receiving the best care, are most likely to bear every year. Three years ago last fall, one of my neighbors, D. Denise, having two orchards of about two hundred trees each, tried an experiment on one of them. The "modus operandi" was by drawing muck from a piece of low land, formerly a black ash swamp, and dividing it among his trees, giving to each tree two-thirds of a cart-load, or two loads to three trees. This not being the bearing year for either orchard, the experiment was a fair one, resulting greatly in favor of the trees which received the muck—so much so that a second application of this kind of muck was made in the fall of 1860, differing from the first only in quantity—this time giving to each tree one load, and applying the same to both orchards. The succeeding fall they were literally bending to the earth with the finest fruit I ever saw, while other orchards in the same neighborhood produced scarcely half a crop. When this experiment has been thoroughly tried, I think it will be proven that the apple has in reality no alternate bearing year, but that it only requires food and nourishment to support it, to produce fine and abundant crops every year. Brother farmers try it, and report progress. E. J. H.

Concord, Mass.

◆

RHUBARB VINEGAR.

It is well known that French vinegar is superior to all other vinegars, it being in a great measure made from the grape, with the assistance of a little sugar. Most vinegars used in this country are adulterations or mixtures of French vinegar, pyroligneous acid, malt vinegar, acetic acid, &c.; and these mixed up are sold in many cases as genuine French vinegar. Rhubarb is sometimes used in making British champagne; and in this way it has been discovered, in cases of failure (the wine becoming acid,) that the vinegar produced by the acid fermentation progressing is very much like and has the pungent taste and flavor of French vinegar. In preparing and making this vinegar there can be nothing more simple, and as rhubarb is now in season, and vinegar of common use in every family, it can be easily and conveniently made; besides as the price of a bottle of good vinegar is charged at 9d. to 1s. to families, it certainly is worth consideration the manufacturing of it, not only on a large scale but by private families, the process being so simple and the cost per bottle so small. This description of vinegar can be made, exclusive of labor or trouble, for something like 10d. to 13d. per gallon, and has more flavor than malt vinegar, and is easier made. The process for ten gallons will be, for a family: Take 25 ordinary sized stalks of rhubarb, pound them or crush them with a piece of wood in the bottom of a strong tub, add ten gallons of water; let this stand 24 hours, strain off the crushed rhubarb, and add 18 lbs. of sugar free from molasses, and a teacupful of best brewer's yeast; raise the temperature to 65 or 68 deg., and put your browst into a 12-gallon cask; place it in a position where the temperature will not fall below 60 deg. In a month strain it off from the grounds, returning it to the cask again, and let it stand till it becomes vinegar. For a large quantity follow out the common process of making vinegar either with malt or sugar, by adding rhubarb, which gives flavor and pungency.—*Scottish Farmer.*

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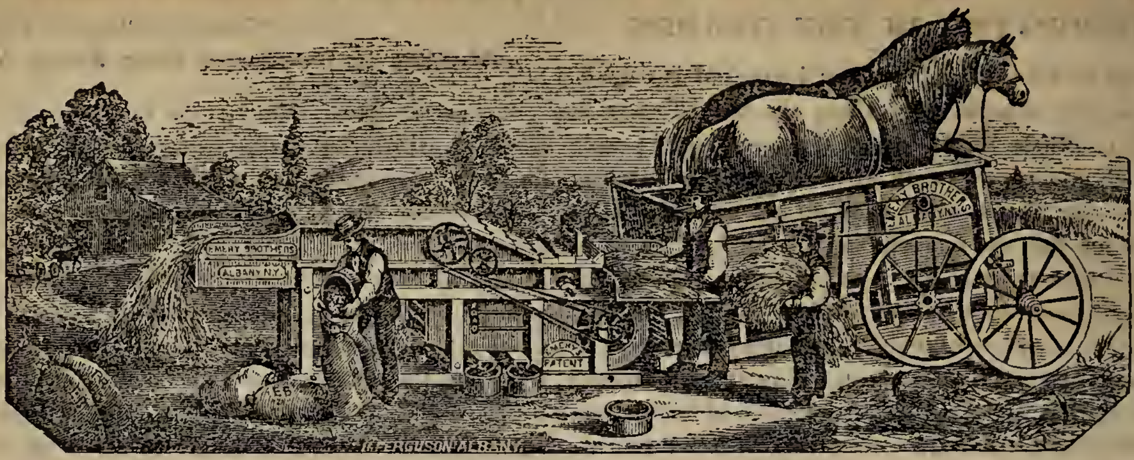
The best way to keep food on a weak stomach is not to bolt it down.



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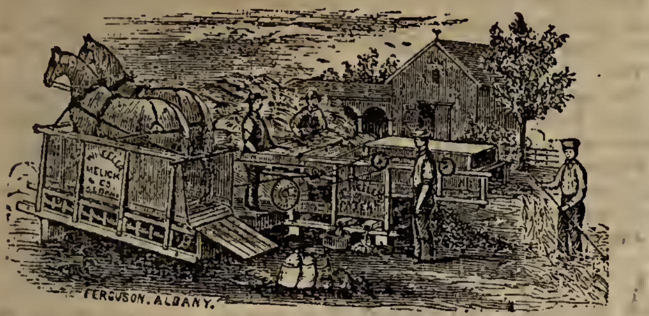
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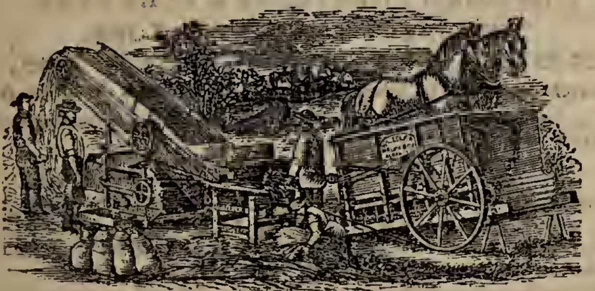

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May 1—w5tm2t. London, O.

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Albany, N.Y.

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Particulars about Railroads, Steamboats, &c., will be given in August papers, as well as in Circular. J. C. TAYLOR.

June 1—m2t. Holmdel, N. J.

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Feb. 20—w3tm2t. St. Johnsville, Montgomery Co., N. Y.

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VOL. X. ALBANY, N. Y., JULY, 1862. No. 7.

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The Cultivator & Country Gentleman.

HYDROPATHY IN THE GARDEN.

We gave our readers some suggestions in a late number, on the importance of Irrigation in the growth of farm crops, and inviting further inquiry and experiment. We now wish to direct the same kind of inquiry to the management of the fruit and vegetable garden.

The application of water artificially appears to have a useful effect on all crops that grow better in moist than in dry seasons. Meadows, for instance, as every one is aware, produce the largest growth of grass when we have plenty of rains, and are light when the early part of the season—the period of most rapid growth,—is dry. Farmers are familiar with the fact that wet swales give a heavier crop of grass, than dry knolls. And some have witnessed examples where the streams from clear springs, flowing in a slow current downward over meadow land, have marked a heavy growth on this watered streak. Rain or spring water, clear or turbid water, will always increase the growth of grass, if not in excess. (Wet, cold, water-soaked places, are often observed to give little else than coarse or sedge grasses—and they furnish examples of the evils of excess.) An example is familiar on our own grounds, where a meadow lay between the fork of two large creeks—partly flats and partly upland. One stream was always very turbid at the time of high water, the other clear. That portion of the meadow washed by the former was uniformly the heaviest, yielding usually three tons of hay per acre, and often more; the other about two and a half. The higher land, similar in quality, but not overflowed, yielded rarely over half a ton, and the line of demarcation between them (the line between the flowed and unflowed,) was as distinct as possible. The whole proved conclusively the benefit of water alone, and the superior benefit of a thin deposit annually of simple mud, which had no fertility in itself greater than other soil.*

These remarks do not however apply to the subject in hand, further than to illustrate general principles. We may add, that discrimination is essential in watering different crops. The wet swale, for example, which will afford the heaviest grass, may produce the poorest corn; yet there is still a certain amount but, much less quantity of moisture essential to corn, for it may be parched and dried by extreme drought.

All vegetables which will receive high manuring, are improved by irrigation—such for instance, as celery, asparagus, rhubarb and cabbages. But the amount must be determined by judgment or some experience, and vary with the nature of the season. All who are familiar with the culture of the strawberry and raspberry, will remember the reduced size and inferior quality of both these fruits when a severe drought has occurred during the time of their ripening. We have known a heavy rain at such time, to double the size of the ripening Franconia raspberries, in two or three days. We have also seen ripening strawberries, placed accidentally under the slow drip of a water cart, doubled in size in twenty-four hours. The artificial watering has this advantage over the irrigation of rains—in being accompanied with no exclusion of warmth and sunlight—an exclusion usually attendant on natural watering, and rendering some of these fruits sourer and less palatable in wet seasons. As a general rule, fruits of a high and concentrated flavor, are rendered more pleasant by the diluting which they receive by irrigation; and seedy fruits, as some kinds of raspberries, are rendered more pulpy in the same way.

A late number of the Boston Cultivator contains an account of some experiments reported by Artemas Newell, of Needham, Mass., to the Norfolk Agricultural Society, on irrigating strawberries growing in a pear garden. A few acres of dry gravelly ridge were planted with dwarf pears, nine feet apart. Between each row, a bed for strawberries was formed, by back-furrowing very deep to the centre, thus making the bed three feet wide, with a furrow between each bed and row of trees, for the water to run in when needed. The water was let into a main channel which passed on the higher side and nearly at right angles to these rows. Between this channel and the rows a plank was placed, set on edge, and with a hole bored for each furrow between the pear rows and strawberry beds. A cork placed in each hole regulated or excluded the water at pleasure. The water passed off at the lower side and irrigated a meadow.

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* The same principle,—the benefit from a thin surface coating of soil on grass, has been proved by scattering fine soil over the surface artificially. Farmers are familiar with the strong and early growth of grass along the borders of corn and other cultivated fields, where earth has been scattered accidentally in turning the harrow or cultivator at the ends of rows.

The results were, the pear trees made twice the growth of wood when well irrigated. The difference in the luxuriance of the trees could be seen at a long distance. "The best trees are where there is irrigation on the surface, and drain pipes laid directly under them, four feet below." We copy the statement of the mode of planting the strawberries, and the effects of the water upon them:—

> "Strawberries I plant between the rows of pear trees, in deep, light beds three feet wide only. By this arrangement the soil is never trodden down either in planting, weeding, trimming, or picking the fruit, and they are much more easily kept free from weeds. The beds are liberally supplied with strong manure, placed in one deep furrow in the centre of the bed, at least one foot below the surface. One row of plants is set directly over the manure, the plants fifteen to eighteen inches apart. They are set in the month of May. The hole for the plant is made with a tool like a marlin-spike, reaching down well into the manure. The roots are let down and the hole is carefully filled with fine earth without pressing, then soaked with water, and dry earth placed over the top to prevent baking. The effect of placing the manure so deep, is to carry the roots of the plant through the manure to the soil in a dry time, to entirely cover the beds by autumn with the most vigorous plants, and to keep the seeds of weeds and grass so low that they will do no harm. The fruit is mostly grown on the new plants, which have derived their vigor from the manure chiefly through the roots of the original plant, the runners of which are cut off in the spring for the purpose of weeding, &c.
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> Most of my strawberrry beds are watered liberally by a constant flow of water along the channels, which have been described. The results are, that the berries are large and fair; they do not ripen quite as early, but continue in bearing much longer; the crop is certain, even in the dryest seasons, when those on dry land are cut off —sometimes before half the crop is matured. In fact, I deem irrigation almost indispensable for the successful cultivation of strawberries in dry seasons."

The irrigation of the meadow doubled the amount of hay.

We may remark in conclusion, that while Irrigation cannot supply the place of manure and good cultivation, it will doubtless prove an excellent auxiliary, where it is practicable to introduce it; and so far as gardening is concerned, deep and enriched soil, and thorough and mellow culture, will go far towards preventing the effects of drought, where irrigation cannot be introduced. A combination of both would, if managed with judgment, produce excellent results.

NOTICES OF NEW BOOKS.

Mr. John Phin of Rochester, has prepared a book on "Open Air Grape Culture," just published at $1 by C. M. Saxton, 25 Park Row, New-York. It contains 375 pages and over one hundred illustrations.

"No one," remarks the author, "having even a few square feet of ground, should be without a Grape Vine. If the soil, aspect and exposure be good, a generous return of luscious fruit may be expected for a very trifling expenditure of time and money. If the conditions be otherwise, still, by care, a tolerable crop of Grapes may be obtained even in very unfavorable circumstances, and no fruit tree yields so quickly and so abundantly as the Vine." Mr. Phin's object has been to compile a treatise on the ordinary management of the Grape, to meet the wants, not of professional vine-growers, so much as of amateurs and beginners, who are so frequently in want of some authority to which to turn for suggestions and guidance. He takes up, quite systematically, the situation, aspect and protection required; the preparation of the Soil, as to draining, trenching, subsoiling, manuring, terracing or garden borders; the planting of the Vines, as to time, selection, distance, marking off for and digging the holes, taking up and putting in the plants, staking and after culture; their care for the three years ensuing, including mulching, treatment of laterals and winter protection; their management, when fruiting, in winter and summer; the subsequent treatment required, with the theory and practice of pruning and training, the construction of walls, trellises, &c., the different methods of propagation, manures and the effects of manuring, diseases and insects, methods of out-door forcing, etc. We next have a somewhat detailed account of several of the principal newer sorts of Native Grapes, and a convenient "tabular view of the size, color, shape, etc., of all the varieties of American Grapes of which any account can be found." A chapter follows on the Manufacture of Wine, and an Appendix, containing descriptions of several vineyards, and about fifty pages devoted to a full account of the Thomery system, translated from the French, and said to be highly recommended by Dr. Grant.

Such is Mr. Phin's programme. Judging from a cursory examination we should think it well carried out, and that the book would be of material assistance to the very large number, both in the city and on the farm, who are now seeking more light and information on the subject of which it treats. There is no variety of Fruit which is now attracting more attention in this country than the Grape.

Messrs. A. S. Barnes & Burr, the publishers of so many standard text books for our institutions of learning, of every grade from the infant school to the University, have just added to their list a new manual relating to a branch of education which has hitherto been far too greatly neglected. Its title is "The Boy Soldier," and it embraces a complete outline of Infantry Tactics precisely adapted to the wants of teachers and scholars in public and private schools. Its instructions are founded with care upon the authorized text-books; and it will amply suffice to supply the place of an experienced drill-master, for its directions are fully and clearly expressed and accompanied by all the necessary diagrams and figures. A large part of our readers, we are confident, will coincide in the opinion, both that thorough and systematic drilling will be a feature of attractiveness and promotive of health in our schools, and also that the experience through which the country is now passing, demonstrates the great convenience and usefulness of acquiring in youth at least this degree of Military knowledge.

Wool Exhibition at Ohio State Fair.

It is announced that the Ohio State Board of Agriculture has decided on having a grand exhibition of wool during the coming State Fair in that city, and for this purpose has established premiums and appointed awarding committees that will induce growers to send in their wool for competition. Four classes have been arranged, comprising Felting Wools, Delaine Wools, Cassimere Wools and Combing Wools. In each class there will be three premiums, of $20, $10, and $5, respectively. None but actual growers are allowed to exhibit, and competition is open to all parts of the United States and the Canadas. Samples must contain not less than twenty fleeces. The Awarding Committees are partly composed of experienced eastern manufacturers and practical western wool men. A capacious building will be erected for the convenience of exhibition, and a wool sale at auction will close the Fair.

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☞ We greatly regret to hear of the recent death of Mr. John W. Holberton, Recording Secretary of the Ontario County Agricultural Society.

The Communication of Abortion among Cows.

[The disposition to "slink their calves," recently very prevalent among the cows in some dairy districts in this State, has naturally created much apprehension. When once started, there seems to be no way of arresting the difficulty; and it sometimes occurs when none of the reasons ordinarily given for its origin, will at all apply. Understanding that there was a theory among the dairy farmers near Philadelphia, as to the sources and communication of this very annoying and often ruinous difficulty, we wrote to D. B. Hinman, Esq., President of the Chester County (Pa.) Ag. Society on the subject, and append his reply below. It will be seen that he presents a very strong argument in support of an explanation, which we have never before seen in print, and which if farther supported in the experience of Farmers in other localities, will prove of important service in promoting the eradication of abortion where it is now prevalent, or preventing its spreading where it may hereafter appear.—Eds. Country Gentleman.]

Highfield Farm, May 15, 1862.

Gentlemen:—Yours of the 6th was duly received, and I have been unable to comply with your request until now.

Many of our intelligent farmers do not believe that abortion in cows is produced by anything they eat, or for the *lack* of anything they do not eat. Among these are many who claim that abortion, or rather the first case of abortion, is produced by accident. A fall, slip, injury by a master cow, or some such cause, produces in the herd the first abortion, which taking place in the yard, causes among the other cows a great excitement—sometimes even to pawing and bellowing, each one seeming anxious to smell of the dead calf. When, on the other hand, a cow drops a fully matured live calf in the presence of other cows, there is always perfect quietness and a disposition among the other animals to withdraw to some other part of the yard. I presume that most observing farmers have noticed this.

We think that when the first case has occurred, and the disease has spread among the herd from mere *sympathy*, it is *continued to the next year and perpetuated through the agency of the bull.*

It is almost universally the case that an aborting cow comes into heat much sooner than a cow that goes her full time—frequently within a *very* short time, and is served by the bull while her organs are much diseased; and the bull, serving a healthy cow soon after, will communicate the disease to her, upon somewhat the same principle as venereal diseases are communicated in another species. How long after serving a diseased cow, the bull will communicate the disease to a healthy cow we cannot say.

I will mention a few cases among a great many that have occurred in this neighborhood, as some evidence of the truthfulness of this bull theory. A large number of Mr. A.'s cows abort; his bull, a fine Alderney, serves them. He living near the village, a number of persons keeping but a single cow, send their cows to this bull; *out of six sent to and served by him, five aborted between five and seven months;* these cows had *never aborted before and have not since.*

Abortion prevailed in another herd. The cows during the spring are all sold to one party and the bull to another party. The party purchasing the bull did not believe in the bull theory, but the next season *nearly every cow served by the bull aborted.* No abortion had taken place on this farm previous to this, and nearly every cow from adjoining farms served by this bull also aborted.

Another case. Mr. D. sells all his cows and retains his bull; the next season his cows abort quite as bad as before.

If your readers who are interested in this subject, will give it their attention, I am quite sure they will find many facts to sustain the theory. H.

NICARAGUA.

Extract from a Recent Letter to The Cultivator, from Hon. A. B. Dickinson, U. S. Minister.

Character of Rivers and Springs in Central America.

The first thing which attracted my attention in Central America, was the excessive whiteness of the wearing apparel of all classes. If not made entirely clean by the washerwoman, the linens and muslins were nevertheless so white that the first inquiry I made after inquiring about the soil was, with what water and by what process are your clothes washed? I got no clue to the secret till I went to the washerwoman, who told me that they always went to the rivers, creeks or springs, and never used rainwater if they could get to any of these places by travelling a mile, or even two. I soon learned the reason of it. In travelling through the country I found a little village where nothing of this nice bleaching was seen. They replied to my inquiry, that no spring or stream could be reached within eight miles, and so they were compelled to wash with rainwater. This led me to investigate the matter, and I discovered that rainwater could be improved a hundred per cent. by having the proper quantity of alkali mixed with it, to slip the dirt out and bleach the clothing. There was no plant growing here that I had ever seen before by which I could detect the character of the soil, though I could tell its depth by the growing trees, and various other indications. The streams, though strongly alkaline in character, were so remarkably clear, and in general appearance so unlike the alkali drainage of other countries, and the vegetable growth so rapid and profuse, that I was completely lost. To see a soil that had been cultivated for the last three hundred years in the manner best calculated to destroy it, still hold out to be the strongest and most prolific soil that my eyes ever rested upon, was almost as great a wonder as the wisdom-confounding phenomenon of Liebig.

The Plain of Leon Fertilized by Volcanic Fires.

I found the magnificent plain of Leon, surrounded by blue-topped volcanoes, and covering hundreds of square miles in extent, with a deep and finely pulverized soil of most wonderful fertility, strongly impregnated with alkali, closely resembling an alluvial deposit, yet showing no sign of a watery formation, and I was lost in wonder and perplexity, until an astounding fact was revealed to me. It was made not by water, but by fire. The huge volcanic furnaces now standing around in silent grandeur were once in full blast, fusing the solid earth with all its buried treasures into a molten mass, and casting it forth into the cooling atmosphere to descend upon the earth in fine impalpable powder, containing the richest fertilizing ingredients. Millions of tons of solid earth were thus sifted through the atmosphere, and spread as softly and as evenly over the surface as the gently falling snow. Here was a process equally powerful, equally grand, but how different from that which formed the great valley of the Mississippi.

The eruption of one of these volcanoes in the year 1835, filled and darkened the atmosphere for three days, and covered the face of the earth with its fertilizing treasures over the whole of Central America. The vast plain of Leon was covered with darkness and filled with gloom and consternation for three memorable days. When the volcanic storm cleared away, and the smiling heavens again appeared, the entire plain was covered over to a depth of several inches with a fertilizing material of inexhaustible richness made by the Great Chemist—who never makes a mistake—with the earth for his crucible and the heavens for his purifier. Thus the soil of this country is kept blooming in perennial beauty, and supplied with inexhaustible plenty. A. B. Dickinson.

ORCHARDS---REVERSED ECONOMY.

In conversing recently with an intelligent farmer of Orange county, he stated that most of the orchards in his neighborhood had been destroyed by the borer. He saved his own by covering the trunks at the roots and for six inches upwards with a thin coating of grafting-wax, and then for protecting this coating, wrapping it around with a strip of muslin. This covering remains for a year or two, when it has to be removed. It answers the purpose effectually. It is not so cheap, nor so easily applied as soft soap, although the latter requires two applications yearly, yet costly as it may be, it is an expenditure that affords a return of more than one thousand per cent. The cost of thus treating a hundred trees would be perhaps one day's labor, and the cost of the wax and muslin for a young or medium orchard, may be two dollars more. The three dollars expense thus expended yearly, are to be placed against the crop of one hundred trees, saved by the application. It is a very poor orchard that will not afford one dollar as an annual average per tree. The cost of this protection may therefore be regarded as effecting a saving of one hundred—a profit on the expenditure of not merely one thousand per cent., but over three thousand.

It may be proper to remark, in passing, for the information of some readers, that the grafting wax, soft soap, or any other external application, only *excludes* the borer after its use, and does not destroy those which have already entered. These must be killed by a flexible wire thrust into their holes, the knife being previously used for clearing the passage where necessary.

Our informant, above mentioned, also informed us that his neighbors could not be induced to give any attention whatever to their orchards oftener than once in about three years, and consequently such unfrequent care availed nothing after the insects had obtained full possession.

A similar loss occurs from any other neglect of orchards, especially during the younger stages of their growth. Newly transplanted trees, will grow five times as fast for being kept well cultivated, as those which are allowed to become enveloped in weeds and grass; and for several years afterwards the contrast of results from these two modes of treatment is very striking. An expenditure of five dollars per acre annually, according to a safe estimate, will bring a young orchard into as good and productive condition, as at least twenty years of neglect. Ten years of good crops are thus secured by the small annual outlay.

Experience has amply proved that one acre of orchard, composed of good, productive, marketable varieties, may be relied on for affording at least fifty dollars per acre yearly. Skillful managers, who raise finer than the average quality sold in market, and who thus secure by special contract with dealers, a higher price, (additional care being also given to picking, selecting, and packing,) have obtained from one to three hundred dollars per acre.

A prominent reason why farming proves unprofitable, is the want of a proper expenditure of capital in cases where it will bring a large return; but in nothing is this truth more strikingly apparent than in the neglect of orchards, and their proper care and cultivation.

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☞ Mr. H. B. Allen of Schenectady county sends us a sample bottle of "Cider Wine," made in the autumn of 1860 from a Country Gentleman recipe, which has given very good satisfaction in his experience.

INQUIRIES ON FRUIT CULTURE.

1. I wish to know whether the quince can be grafted upon the pear. (1.)
2. Is there any mode of distingushing the dwarf pear from the standard?
3. How are pears dwarfed? (2.)
4. Does the nectarine grow from the seed—also the apricot? (3.)
5. Is there any such thing as the ground almond—if so, where can it be procured? (4.) D. C.

New-Brunswick, N. J.

1. We are not aware that the pear has ever been used as a stock for the quince, but it has often occurred to us that it might be useful in preventing the attacks of the borer, as this insect, which frequently destroys the quince, rarely touches the pear.

2. Those who are familiar with the appearance of the bark can readily distinguish a dwarf from a standard pear, by observing the quince bottom of the former. Dwarfs being usually trained unlike the standard, commonly enables any one to see the difference. The swollen ring at the union of the pear and quince, is another indication. Pears are usually dwarfed by working on the French quince as a stock. Other stocks, as thorn, mountain ash, apple, &c., have been used, but the trees commonly soon fail on these, and they have long since been discarded.

3. The nectarine, which is a smooth skinned variety of the peach, is usually propagated by budding on the peach stock. The stones of nectarines commonly bring nectarines by planting, but not always. Lindley says there are various instances where peaches and nectarines have grown on the same tree, and we have witnessed an example of this sort, for one season only, the nectarine being hardly so glossy as common nectarines. The apricot belongs to a different genus from the peach, or to the same as the plum, but is a perfectly distinct species. The stone is smooth, like the plum stone, and always produces apricots; although to secure good sorts, it must be worked by budding on the peach, apricot or plum stock.

4. There are two dwarf species of almond, but they are both ornamental only.

FLAX COTTON.

The Legislature having appropriated the sum of $2,000 for the machinery to test the experiment of manufacturing *Flax Cotton*, to be expended under the direction of the State Agricultural Society, the Executive Committee would call the attention of those interested in the culture and preparation of flax to this subject. The object of the Legislature was undoubtedly to secure a preparation of flax as an economical substitute for cotton, so as to be used on cotton machinery. The Executive Committee desire to carry out the wishes of the Legislature, and to have this experiment fairly tested, and would solicit experiments showing the preparation of flax for this purpose, accompanied with a statement of the culture, production and preparation, including the cost of the various processes employed.

Whenever parties have tested these questions, and are prepared to submit their proceedings, a committee of competent judges will be selected to make the necessary examination, and report to the Executive Committee, for their action, the result of their investigations. Should any of those engaged in making these experiments succeed in accomplishing the object desired, the money will be apportioned to the successful competitors as may be deemed proper.

All communications on this subject may be addressed to the Secretary, State Agricultural Rooms, Albany.

Albany, May 26, 1862. B. P. JOHNSON, Secretary.

MASSACHUSETTS AGRICULTURE.

Massachusetts is a small state in territory. There are but three of the sister states behind her in this respect. Divide the State of New-York into parcels of equal dimensions, and she would give six states. Virginia is eight and one-half times as large; Missouri has nine times as much land. Texas could spread twenty-nine such states on her soil without crowding them, and California has a lap capacious enough to hold twenty-five such states. She has the most sea-coast in proportion to her size, of any state in the Union, excepting perhaps the peninsula of Florida, the Atlantic forming the whole of her eastern and full one-fourth of her southern boundary. This exposes her to the blasting influence of east winds at all seasons of the year.

Her soil is of all elevations from the level of the ocean to the summit of Graylock, in Berkshire, 3,500 feet above tide water. Her natural productions were heavy forests, rocks and ice. The former have yielded to the progress of civilization and the arts. Her rocks gave firm footing to the Pilgrims when they landed at Plymouth, and have become enduring monuments of the country's history, at Bunker Hill and in Charleston harbor. Her ice has become an article of traffic in India and throughout the tropical regions.

She has sent forth her sons and daughters into all lands, and is liberally represented in all the settled portions of the North and West. Still she has now on her small farm, a home population of a million and a fourth of inhabitants, ranking the sixth state in the Union in free population. Still she has room and ample employment for more.

Her soil is hard, but yields liberally to the skill of the cultivator. Her winters are long, extending almost to the dawning of summer. Her springs are short, and the transitions they produce resemble the work of magic. Her autumns are long and beautiful—some portions of them magnificent through beauty of her scenery.

As is usual in all new countries, agriculture was the earliest employment of her inhabitants: when first cleared of the heavy forests, the virgin soil yielded flattering returns to the labor of the husbandman, by the practice which to the present day is too prevalent in all new countries, of cropping without returning any manures to the soil.

It was not until the commencement of the present century, that special efforts were made for a general improvement of her agriculture. The Berkshire Society got under successful headway in 1811, and other associations of a similar character were soon formed in other parts of the State. As a proof of the efficiency of their labors, twenty-five such societies now exist under the patronage of the State, or nearly an averrge of two to each county. Of these, there are three in Berkshire, to wit, the Berkshire, with a permanent fund of $12,000. The amount paid by this Society in premiums is $1.188. The Housatonic in South Berkshire, with a fund of $10,716, and the Hoosac Valley, a young institution, fund $2,000. The amount paid in premiums by the Housatonic is $802, and Hoosac Valley $334.50. The funded property owned by the three societies in Berskshire, is $24,716, and the amount paid by the them (collectively) in premiums, is $2,324.50.

The amount annually disbursed by the State to her twewty-five Agricultural Societies, is $13,196.95. They paid out in premiums and gratuities in 1860, $13,323.03. The amount invested in permanent funds by the several societies, is $197,212.20. The value of real estate held by these societies, mainly in fair grounds and buildings, is $153,001.21.

In addition to these twenty-five societies, there are many Town Associations, Farmers' Clubs, &c., which hold annual exhibitions and award premiums, from funds raised from their own resources. These Club exhibitions are sometimes large, and always beneficial. One great advantage of them is, that they come within the reach of many to whom circumstances cut off the privilege of attending larger fairs.

Another benefit arises from them, in that their members hold stated meetings during the winter, when lectures are given, experiences related, agricultural subjects discussed, and the bonds of social good feeling strengthened. At the commencement of the present winter there were over fifty such associations in the State. They are now so popular from the good effects resulting from them, and the good cheer always abounding, that the number has no doubt nobly increased.

AGRICULTURAL LIBRARIES.—Every year goes to show most conclusively, that agriculture is entitled to a position among the learned professions. Why should it not be? The physician, who has only to do with his own species, must not only be educated, but he must spend his life in anxious study if he would win success in his employment. He must have a library.

The lawyer, a member of a profession that owes its existence to human folly, rather than human necessity, must be educated. He must have his library.

The farmer must feed all. The whole class of mortals are as dependant on him as on the physician. He is of more importance in community than a legion of lawyers. The whole natural world is included in the sphere of his operations. Storm, wind or sunshine, come to aid or blight his prospects, according to their appointment. The birds, beasts and insects have to do with his labors. Indeed every thing in the air above and on the earth goes for his benefit or annoyance. How important that he should be acquainted with all these? To be so he must not only study but observe. A library should be considered as important to him as to any class of men.

Such libraries, even by individuals, are now easily obtained. A set of the COUNTRY GENTLEMAN, which costs but little, will give to any farmer an amount of knowledge worth ten times its cost for present reading, and is of incalculable benefit as a work of reference. So with other papers. So with many of the books now published. Every farmer can and should have a library. There are many private libraries in Massachusetts. There are in other states. In Massachusetts, however, there were two hundred public agricultural libraries, very near two to every three towns. This number will soon be much larger. There are but few towns in the old Bay State so regardless of the advance of the age, but that they will establish such libraries.

But the crowning effort for the advancement of agriculture in our ancient Commonwealth, is its introduction as a branch of study. This is beginning at the right place to build up a thorough system of agricultural training. It commences at the right period of life, and it extends the benefit it affords to all. The rich and the poor are on an equal platform there, to start in the race of life, and each can make improvement according to their perseverance.

It is with great pleasure that we learn of the successful introduction of the "Manual of Agriculture" into these schools. It omens a bright dawning in the long sought day, when the principles it inculcates should be made subjects of school education. May its success be as triumphant as the facts it contains are valuable in the successful practice of the rural arts. WM. BACON.

Richmond, Mass.

[For the Country Gentleman and Cultivator.]

Average Yield of Milk and Butter per Cow.

Messrs. Editors—As the statements which are given to the public from time to time, in this and other journals, in regard to the yield of milk and butter of different cows and different dairies, vary very much, and as there does not seem to be any settled and universally acknowledged average, which might serve as a useful standard of comparison for these *widely varying* reported yields, it occurred some time ago to the writer of this, that inasmuch as a standard of judgment of this kind, obtained from the collection and collation of a very large number of facts, and getting therefrom an approximation to a true average of the whole, a considerable contribution might be made towards this desirable object, by treating in the way just named, the very large number of facts of this kind in the two volumes of the Country Gentleman for 1861. Among the advantages of an average obtained from so large a collection of cases that the result might be considered a *standard* of comparison, this would be one, viz., that whenever a farmer should find his own dairy *below* the average, he might thereby be stimulated to investigate, and if possible to discover the cause or causes of his failure;—an investigation which could scarcely fail to be of much use to him, as it would lead him to a better acquaintance with the best established facts and opinions as to the dairy qualities of various breeds; the best methods of feeding cows, both in winter and summer; the best kinds of grass for pasture; the value of top-dressings with bones and other fertilizers, as well as some other things having an influence upon the prosperity of a dairy. So too, when reports were made of yields much *above* the settled or approximate average, it might lead the reporter to benefit the public by a statement of the modes of feeding and otherwise managing the cows, by which in his opinion the extra or above-average yield had been obtained.

As a contribution towards obtaining such a standard of comparison, by which the foregoing and other advantages might be secured, we commenced in a previous article, (see Co. Gent., May 1,) a summary of the several statements relative to the yield of milk and butter which have been put upon record in the successive issues of this journal for 1861. Resuming this abstract where it was left off in our former article, we find at page 252, vol. 17, an article by J. L. R. of Jefferson Co., in which he maintains that the yield of dairies is usually about in proportion to the treatment the cows have received, that is, the kind of food given to the cows, both when in milk, and when dry. "When the yield has been large and remunerative, the cows have been well cared for—have had a *full supply* of good, nutritious food." In illustration of the fact that the difference between a full supply of good nutritious food and a short allowance, makes quite a difference in dairy products, he gives some details as to a lot of ten cows which were kept through one winter on straw, and which averaged during the next season only about 150 lbs. of butter, while his had averaged over 230 lbs.—two being heifers. This was a difference of 80 lbs. per cow, which at 20 cts. per lb., amounted to $16; and if so much had been expended on hay and meal for each cow, the probability is that there would have been a full return for the better feed in the more abundant product of butter. At all events, so confident is J. L. R. in the close connection between good feed and a full supply of it, that with a good lot of cows of full age, that have been well kept from calf-hood, he would not give one dollar to be insured a yield of 240 lbs. of butter to the cow, in a fair average season.

The next article, furnishing *data* for our present purpose, is the very interesting and instructive one by S. L. Wattles of Delaware Co., N. Y., (Co. Gent., vol. 17, p. 273,) which we have seen either quoted or noticed in almost every agricultural journal, both British and American, which has fallen under our observation. Mr. W. gives statistics of his dairying or butter-making for eight successive years, from 1853 to 1860, and the following is the average yield of butter per cow for these years respectively:—

1853,	average	per cow,....	250	lbs.	1857,	average	per cow,....	218	lbs.
1854,	do.	do.	216	"	1858,	do.	do.	211	"
1855,	do.	do.	231	"	1859,	do.	do.	242	"
1856,	do.	do.	215	"	1860,	do.	do.	266	"

These averages are probably a little less than they might have been fairly enough called, as Mr. W. has had heifers in his dairy every year, and has rated 2-year olds as two-thirds full grown cows, and 3-year olds sometimes at the same rate, and sometimes as full grown cows, notwithstanding that according to his experience, (with which agrees that of ourselves and others,) a 2-year old heifer will not generally make more than half the butter in one season as she will make after she becomes six years old, nor a 3-year old over two-thirds as much butter as when a full-grown cow. Another fact is to be taken into consideration in endeavoring to estimate aright these averages, viz., that Mr. Wattles' cows were mostly small in size, and *all of the common breed*, with the exception of one heifer, which was a half-blood Ayrshire, and is spoken of as quite superior both for milk and butter. She is taken account of only during 1860, the last of the eight years.

After making allowance for these considerations, which would warrant us in raising Mr. W.'s averages, especially if to be put into comparison or into a general reckoning with those obtained from dairies of larger cows and of "improved" breeds, the results are of *more than usual value* as *data* for the determination of *a general average*. His statistics extend over a comparatively large number of years, and his stock of cows was large enough—usually 12 to 14—to render the account of the general average production of much more value than such accounts are when the stock of cows is smaller, and probably more select, or when only one extra cow is the subject of report, or when the account is confined to a single year, in which circumstances may have been more than usually favorable or unfavorable.

The average yield of butter in the dairy of Mr. W. differs so much from that in the dairy of Mr. Pratt, (see page 291,) though the cows in both were of the kind called native, Mr. W.'s general average for eight years being 231 lbs., and that of Mr. P. for four years being 159¾ lbs., as to make it very desirable that some explanation should be made as to the cause. Can any of the readers of this throw any light upon the subject? Agricola.

[For the Country Gentleman and Cultivator.]

Spring and Summer Beverage.

The following recipe from a New-York paper, has been pretty thoroughly tested in this vicinity, and gives good satisfaction. To such as need a spring drink, to prepare the system for the change of season, it will be highly useful. The cherry bark and sarsaparilla, can be found in most localities in the woods, or the whole can be bought at the druggists for a small sum, (4 or 5 dimes.) There is nothing particular about the dose—from a tablespoonful to a teacupful once or twice a day, as may be agreeable:

One pound sarsaparilla—12 ounces wild cherry bark—6 ounces liquorice root—1 ounce gentian—1 ounce mandrake root—1 teaspoonful cinnamon—half do. red pepper. Simmer the whole in 6 gallons water till it is reduced one-half—then strain and bottle it. St. Lawrence.

How to Clarify Quills.

Cut off the small top of the quill, tie them *loosely* in bundles, fix them nearly upright in a saucepan of water, in which a small piece of alum has been dissolved—about the size of a walnut of alum to a quart of water; let them boil slowly until they become clear; add a little tumeric or a small pinch of saffron to the water to give them the yellow color; dry them in the sun. You should tie paper round the feather part of the quills to keep them from dust. You can increase the quantity of alum according as you wish the quills more or less brittle.—*Irish Far. Gazette.*

The National Department of Agriculture.

We have not seen the law recently passed by Congress, establishing a Department of Agriculture, but give below the substance of it, as we find it in the newspapers:

1st. That hereby is established at the seat of the United States Government, a Department of Agriculture, the designs and duties of which shall be to acquire and diffuse among the people useful information connected with agriculture; also to procure, propagate and distribute seeds and plants.

2d. The President shall appoint, with the advice and consent of the Senate, a Commissioner of Agriculture, as the executive officer of the Department, he holding his office by a tenure similar to that of other civil officers appointed by the President, with a salary of $3,000 per annum.

3d. The duty of said Commissioner shall be to acquire and preserve in the Department, all information concerning agriculture which he can obtain through books, correspondence, and by scientific experiments, the records of which shall be kept in the office, by a collection of statistics, and by other appropriate means within his power, to collect new and valuable seeds and plants, to test such as require it, to propagate such as are worthy, and distribute them among agriculturists. He shall report in writing to the President annually, in which he may recommend the publication of papers forming parts of, or accompanying his report, which shall also contain an account of all moneys receeived and expended by him; he shall also make special reports on particular subjects, whenever required to do so by the President or either house of Congress, or when he shall think the subject in his charge requires it. He shall have charge of the property of the Agricultural Division of the Patent Office in the Department of the Interior, including the fixtures and property of the propagating garden. He shall direct and superintend the expenditure of all money appropriated by Congress to the Department. He may send and receive through the mails free of charge, all communications and other matter pertaining to the business of his Department, not exceding in weight, 32 ounces.

4th. The Commissioner of Agriculture shall appoint a Chief clerk with a salary of $2,000, who, in absence of the Commissioner shall perform the duties of the same; and he shall appoint such other employees as Congress may provide, with salaries corresponding to those of similar officers in other Governmental Departments; and he shall employ other persons, as Congress may provide, for such time as their services may be needed, including chemists, botanists, entomologists, and other persons skilled in the natural sciences pertaining to agriculture. Said Commissioner, with all persons employed in his Department, shall make oath or affirmation to execute the trust committed to him; and said Commissioner and chief clerk shall also give bonds to the United States Treasurer, the former in the sum of $10,000, and the latter $5,000, for the faithful discharge of their several trusts and duties.

This law was approved by the President on the 15th of May, and shortly afterwards he nominated Isaac Newton of Pennsylvania, the present Chief Clerk of the Agricultural Department of the Patent Office, as Commissioner, but the nomination has not as yet, we believe, been confirmed by the Senate.

* * *

[For the Country Gentleman and Cultivator.]

RECIPE FOR A BREAD PUDDING.

Take one quart sweet milk, 3 ounces of light wheat bread, (salt raising bread is best.) Soak the bread in the milk till it is soft, then mash it fine, add two well beaten eggs, a pinch of salt, a lump of butter about the size of a hickory nut, and a small teacup of sugar. Season with nutmeg, or a few slices of lemon; bake in a brisk oven one hour; raisins may be added if desired.

This makes an excellent pudding, far better, I think, than the popped corn pudding advertised in Greely's New-York Tribune a year or two ago. Avis. *Benton Co., Iowa.*

GERMINATION OF SEEDS

Messrs. Editors—I have read with much interest in the Country Gentleman of March 6th, "*the Conditions of Germination*," from the pen of Professor Johnson. The article abounds with many good suggestions, and is in the main correct. I desire, however, to correct an error that he has fallen into in asserting that "the seeds of the willow and coffee will not grow after having once become dry, but must be sown when fresh; the former loses its germinative power in two, the latter in six weeks after ripening."

In regard to the willow, I have nothing to say, for I have no practical knowledge on the subject. But for the information of the Professor, allow me to say that in much of the country where coffee is grown, the year is about equally divided into the wet and the dry seasons. The coffee matures about the end of the wet, or the commencement of the dry season, at which time it is gathered. It is planted at the beginning of the wet season, after the soil has become sufficiently moistened for the seed to germinate. If the seed has been well taken care of, and is properly planted, it sprouts and grows without difficulty. It will be seen therefore, that instead of losing its germinative power in six weeks, six months is the earliest period in which it can properly be planted. The men who plant and raise coffee-nurseries in Nicaragua and Costa Rica—where coffee equal to the best in the world is grown, are not particular whether the seed is of the same year's growth, or one, two, or even three years old; as its germinating properties do not appear to depend so much upon its age, as on the manner in which it is cured. They are very careful and particular in curing that which is designed for seed, in the house or shade, as either excessive sun or moisture is fatal to its growth

Nothing is truer as a general rule than that the newer the seed the better the result; yet there are exceptions to this rule. Experience has proved that in localities where the bug preys on the pea, it is much better to keep the seed over for a year or two for the purpose of eradicating the bugs and preventing their communication to the succeeding crop.

Professor Johnson also observes that "Loudet made trials in 1856–7, with seed wheat of the years 1856, '55, '54 and '53," and that the result was that none of the wheat of '53 grew.

I do not think that Loudet's experiments were a fair test, as I have sowed wheat of nine years' age, that nearly all grew.

The parsnip suffers more from long keeping than any other seed with which I am acquainted. It is always wise for a farmer to burn what parsnip seed remains after planting for the season, as very little of it will grow the second, and next to none the third year.

Leon, Nicaragua, May 1, 1862. A. B. DICKINSON.

* * *

Value of Coal Ashes.

A correspondent of the Dairy Farmer says—"The only object which I had in view at first in using this article, was that of absorbing the liquid portions of manure about the stables, which was done by scattering them upon the lowest parts of the floor every morning after cleaning out the stables, at which arrangement the fowls of the barn seemed perfectly delighted, as they immediately commenced devouring certain portions of the ashes as eagerly as though it was corn; the result of which has been, that we have been supplied with an unusual quantity of eggs during the winter season; as this article most likely furnishes them with the necessary material for forming the shell. The next advantage was that of seeing the cattle take their places in the stable, without slipping and falling, as they frequently did before the ashes were used."

[For the Country Gentleman and Cultivator.]

HAYING--BUILDING STACKS AND RICKS.

"When now the grass, oft-turned beneath the sun.
Is dry and crisp, and rustles to the tread,
Then comes the rake with many a long-drawn sweep,
Gleaning the shaven grass, until the plain,
Rough with the sultry stacks. appears a field,
Thick set with russet tents." T. B. Read.

"S. Edwards Todd—I have been very much interested and profited in your communications for the Co. Gent., for several years past, and my apology for writing to you is, to ask if you can and will assist me by your pen, in rigging a hay elevator for building a hay rick. As I put all my grain in my barns, I have been accustomed to secure my hay in a rick, fifty or sixty feet long, and about twenty-five feet high; and we find the labor of pitching so much hay so hard and expensive, that if possible I would, as you have formerly recommended, make my horses pitch the hay. I have no doubt that very many of the readers of the Country Gentleman besides myself, would be very much profited by such an article as I think you could give us. T. W. R."

In my travels through various parts of our country, both in New England and the Western States, I have been not a little surprised to find such a great want of skill and good management in securing the hay crop; and, I have been still more surprised to learn that those farmers, who always perform every job in the hardest and most expensive way, do not appear to think there is any easier way of performing such hard jobs, as pitching hay, except to do it by hand, as our good fathers did.

In New-England, last season, I saw many farmers who make much hay, tugging and sweating, and lifting with all their might for one hour to get a ton of hay into the mow, when they had two strong, fat horses standing idle, which would have pitched such a load off in ten minutes. In one place I saw four men working faithfully for about one hour, to get a ton of hay into the upper part of the mow, and when I told them that for a few dollars they could obtain a horse fork, with which one man could pitch such a load twenty feet high in ten minutes, they replied that they had never heard of such a thing.

In Pennsylvania on some grain farms the grain is all put in the barn, and the hay is secured in ricks, which are sometimes sixty feet long, and from twenty to twenty-five feet high, and from fourteen to sixteen feet wide. The usual way of building such ricks is, as soon as they are so high that a man cannot raise a forkful on the rick from a load, to place a load by the side of a rick, and then pitch the hay from one load to another, and then to the rick. This practice is also adopted in building stacks. In either case the progress is slow, and the labor hard.

In order that we may all appreciate what may be penned with reference to the different modes of pitching hay with horses, let us pen a few thoughts, for the benefit of beginners, with reference to

The Correct Way to Stack Hay.

There is more science in building a stack of hay correctly than most people have ever supposed. A man may build a *handsome* stack, but it may be built in such a manner that it will not turn the rain well. And if it does not turn rain well, be it ever so handsome, it is not stacked correctly.

Square corners in the upper part of a stack should always be avoided, because hay will not turn water as well where the corners are square as where the top is round. And, more than all, a round stack always *looks* better than a square one.

It is not essential that there should be a bilge in a stack in order to have it turn rain well. A bilge in a stack is only a matter of taste. The main object is to place the hay in the best possible position to turn rain.

There is a *wrong* way and a *right* way to stack hay, and many men adopt the *wrong* way, and build a handsome stack, but it will not turn rain well. I will describe the wrong way of building a stack.

Beginning at the circumference of a stack first is always wrong, because the practice tends to keep the middle of a stack the lowest, which should always be avoided.

The correct way is to commence at the centre and place forkful after forkful round and round the centre, until the stack is as large as is desirable. The middle should always be kept a foot or more higher than the circumference. This is particularly essential, after we begin to "narrow up," or "to draw in" the sides.

When laying the outside course of forkfuls great care should be exercised to place as many bunches of hay up and down as may be practicable, as the spears of hay will carry off the water very much better when they are placed lengthwise—up and down the stack—than they will when they are crosswise and lying in every other position. By the exercise of a little good skill in placing the hay with a fork, most of the spears of hay will be in the best position to carry off the rain.

It is very difficult to tell with a pen how this is to be done with skill. With a fork, on a stack, the instructions would be quite easy.

Stacking Round a Pole.

Although a pole in the centre of a stack is sometimes objectionable, still it is better to have a pole in the center whenever it is practicable.

There are several cogent reasons in favor of having a a good stiff pole set firmly in the ground in the centre of a stack. One very important advantage is it furnishes an undeviating center to work by when carrying up the stack, which is very important, as every good stacker will admit. When there is a pole in the centre the stacker will be enabled to commence the foundation more accurately, as he can measure at any time with a light measuring pole, to ascertain whether the stack is round, or whether he is laying out the sides or drawing them in.

Another very important advantage in having a pole is it keeps a stack erect when it is settling, and it holds the top and the entire stack from being blown over by the wind. Beginners should always build a stack around a pole or tall tree until they can stack well without a pole.

Pitching Hay on a Stack.

Every good stacker knows that in order to stack well the hay must be laid fairly on the stack, and not hauled up or shoved up the side of the stack, because such a process deranges the form of it by displacing the outside course. And in order to have a stack settle evenly and true, the hay must not all be pitched on one side of it, but on two opposite sides, or it should be dropped near the center of the stack. When hay is all pitched on a stack from only one side, unless it is dropped in the middle of it, when the stack comes to settle it will be liable to settle least on the side where the hay is pitched on, thus causing the stack to lean so far from a perpendicular that the hay will not turn the rain, but will allow it to enter, and damage much of the hay.

The foregoing considerations will enable us to construct a horse fork for pitching, or to rig

An Elevator for Pitching Hay.

The most common mode of rigging an hay elevator for pitching on a stack is to procure three poles about thirty feet in length, and bore a hole through the small end of all of them, and put an iron bolt through them all, and set them up on the butt ends where the stack is to be made, with the top of the poles over the centre of the stack. Of course this arrangement will bring the foot of one pole on one side of the stack, and the foot of two other poles on the opposite side.

A pulley is then hung at the junction of the top of the poles, which receives a rope, which rope is passed around another pulley attached to a stake driven firmly in the ground. The lower pulley is sometimes attached to the lower end of one of the poles. When this is done, the foot of the pole must be set a few inches in the ground, or it will be liable to be moved when the elevator is in operation. When the "snatch block" or lower pulley is attached to a stake, if it be placed farther from the centre of the stack than the lower end of the poles are, the lower ends of the poles must be staked down, or the top will be hauled over.

After the stack has been built four or six feet high, a few boards must be placed on the ends, between the stack and the hay that is to be pitched, to keep the forkfulls from hauling against the side of the stack, as they ascend. The tops of the boards should be nailed to a piece of joist fastened from one pole to another; and the lower ends should be set in a trench in the ground, or nailed slightly to a small stick of timber, placed on the ground.

Another Kind of Hay Elevator

Is sometimes rigged by attaching a pulley to the top of a stiff pole in the centre of a stack or to a tree, around which the stack is to be built. When a pole is used for such a purpose, it is set firmly in the ground and braced, and two or three guy ropes extend from the top of the pole to stakes in the ground, at a distance of thirty or forty feet from the stack. These small guy ropes—half an inch in diameter is large enough—will keep the pole steady and erect, when the fork is in operation. A breast work of boards placed on the ends must be made on one side of the stack, as has already been mentioned, to keep the forkfulls from hauling into the side of the stack, as they ascend. Those who have never seen a horse-fork in operation, will understand the forkfull slides up the sides of the boards, and passes over the top of them, and then swings to the centre of the stack.

Hay Elevator with a Crane.

In building a rick fifty or sixty feet long, there could be two poles set erect in the middle of the rick, to the tops of which a pully might be attached; or there could be one or two sets of long poles set up *over* the rick. Either mode will answer a good purpose. But I think the following contrivance will be most convenient for such a purpose.

Procure a pole about twenty-six or twenty-eight feet long, and about six inches in diameter at the top, and fit an iron band firmly around the small end to keep it from splitting. Bore an inch in the top end about eight inches deep, and drive in an iron pin an inch in diameter, letting it extend out four inches. About seven feet from the top of the pole, shave it round and smooth, for about one foot or more in length. Now, set this pole firmly in the ground, by the side of the stack—say four feet deep. Hang a wooden crane to the top of this pole. The horizontal arm of the crane may be about seven feet long, three by four inches square, at the large end, through which the iron pin in the top of the pole passes, and made of a true taper to the small end, which may be two and a half inches square. The hinge stile of the crane may be three inches square and seven feet long, the top end tenoned into the arm that is on the top of the post. The lower end of the stile has a block hinge bolted to it, and fitted to the pole and greased, so that the crane will turn clear round the pole. A brace under the arm of the crane completes it.

Now, attach a pulley to the end of the arm of the crane, and another to the lower end of the stile, and another near the foot of the pole and let the rope pass over each of these pullies, with the fork at one end of the rope and a horse at the other end.

Now, drive a load of hay close to one side of the pole and raise a forkful, and when it is rising, let a man on the rick have hold of a small rope which is attached to the end of the arm of the crane, and haul the crane with the forkful over the stack, and drop it where he desires to have it. As the horse is backed up, the fork and crane are brought back over the load, and another forkful is lifted.

In case a farmer did not wish to set a pole in the ground, the lower end could be tenoned into a square frame of timber lying on the ground and braced firmly, and a lot of stone placed on the frame to keep the pole erect. In this case, the pole could be hauled from place to place.

I think I have described these different kinds of riggings, so that there will be no difficulty in making them. Any farther inquiries will be cheerfully answered.

The Way to Hitch the Horse.

When a horse is hitched to the end of a rope in the usual way, he is incessantly stepping out of his traces, which is a very great hindrance. To obviate this difficulty, have a light whiffletree not more than two feet long, and take up the traces short so that the whiffletree will touch his thighs behind, and lash the traces to the breeching. When a horse is hitched in this manner, he may be backed fast or slow, or turned round short, and his feet will never get out of the traces.

In answer to inquiries about horse forks, I will simply state that I have no interest in the manufacture of any forks; but, in case a man should write me, I could get one made to order in this city, that would give the best of satisfaction. S. Edwards Todd.

Auburn, Cayuga Co., N. Y.

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STRAWBERRIES IN PHILADELPHIA.

Philadelphia, 6th mo., 11th, 1862.

I attended last evening the monthly exhibition of the Pennsylvania Horticultural Society. The storm raging at the time and throughout the day, reduced the exhibition of fruits and flowers, as well as the attendance. There was a small but excellent collection of strawberries. Among them I observed dishes of the Hooker, the berries of which measured an inch and a half in diameter, and others of different known sorts as large. Downer's Prolific proves valuable here, and the berries have a beautiful appearance—several members informed me that it would probably nearly or quite equal Wilson's Albany for productiveness. Scarlet Magnate is good, the berries usually about an inch and a fourth in diameter, but I was told that the shortness of the fruit stalk, causing the berries to rest on the ground, was a serious objection—one side of nearly every berry was pale colored, in consequence of lying on the ground. I saw the finest dish of the Peabody I have met with; the berries averaging an inch and a half in diameter. Its unproductiveness, unless very carefully cultivated in stools, condemns it for common culture. The Secretary of the Society however informed me that by the best attention, he had raised at the rate of 4,000 quarts per acre, or 120 bushels, which is about one-third or one-half that of the Wilson. The Fillmore is regarded here as a valuable sort—the berries are borne well up on stout stems, the plant hardy, vigorous, and productive. The berries which I examined averaged over an inch in diameter. The Lady Finger, which in form much resembles Scott's Seedling, but is sometimes much coxcombed, is considerably cultivated. A dish of the Alice Maude was perhaps the finest looking of all, but a variety that will not bear a pint on a square yard, must be rejected. Among several new sorts, the Abington Blush, a seedling of the Wilson, with very light colored flesh, excited considerable attention; but I could not judge of its quality. The Triomphe de Gand, as nearly everywhere, is highly esteemed, although often but moderately productive.

A tropical fruit, fully ripe, known as the *Philodendron*, from the garden of Robert Dundas, composed of small portions or berries on a fleshy receptacle 10 inches long, was quite a novelty. It is juicy, rich, exceedingly delicate, and very high flavored—a little resembling, but greatly superior, to the fully ripe fruit of the Mandrake.

I observed five bunches of the White and Grizzly Frontignan that measured 10½ inches long, and Hamburghs 10 inches. J. J. T.

SERIOUS ERRORS---STABLING CATTLE.

One of our best agricultural journals publishes a communication containing the following remarks on the subject of keeping domestic animals, and the fodder they are to eat, amidst the fumes of manure:—

> In view of the testimony on the subject, I am nearly persuaded that it is better, both for the hay and other forage, for farm stock, and the animals to be fed thereon, to keep them separate. The fumes about a barn, without a cellar even, may be objectionable, and, doubtless are, though ordinarily far less so than where there are manure composting cellars; in order, therefore, to avoid all these objections, may it not be deemed better—yes, is it not better, to build barns to keep the fodder in, or else use caps, and in connection therewith, to build sheds and stables for cattle, horses and sheep? Will not the improvement in the sweetness and palatableness of the forage, over that kept in a barn with stables, where is a large number of animals whose respiration and excrements cannot but taint the hay, grain and roots stored under the same roof, with a large composting manure cellar underneath with filthy swine more or less employed as composters, warrant the economy of keeping them separate? So it seems to me as at present informed.

The writer of the above extract appears to take for granted the following points:—

1. That wherever domestic animals are, the air must be filled with "fumes, from respiration and excrements."

2. That these fumes are so fœtid as to spoil any fodder or hay which they reach.

3. That swine are so filthy that they should not be admitted to the decent company of a common barn.

4. That therefore separate buildings should be erected —one for cattle, with the fumes, manure, and "filthy swine," and the other for the fodder.

It is the superficial adoption of such opinions, that has induced so many to regard stabling cattle, or sheltering them otherwise, in winter, as an objectionable practice, and incompatible with cleanliness. If animals must necessarily breathe fœtid fumes, and be plastered with manure, if stabled, it is probably better to let them shiver in cold winds, at the risk of losing a good deal of flesh before spring, and consuming 30 per cent. more food—yet we admit it is hard to choose between such evils. It should be laid down as an unalterable rule, 1, that cattle kept in barns should have sufficient labor expended upon them, by littering with straw, frequent cleaning, and a free use of absorbents, connected with *ample ventilation*, to preserve entire cleanliness, and freedom from all "fumes." The fodder saved and the flesh added will amply repay this labor. Secondly, that foul air, that will spoil hay, will seriously injure the delicate texture of the lungs of domestic animals; and that they deserve a pure air as well as the hay. Thirdly, that swine are not essentially filthy animals—they are often driven to become so, by the carelessness and inattention of their owners. Give them a clean and comfortable dwelling, with plenty of dry litter, and they will appreciate and enjoy it, and, what is not to be forgotten, will grow and fatten more rapidly.

If a barn is well constructed and well ventilated, and hay and stable separated by tight partitions and tight floors; and if the inmates receive the care and attention which mere pecuniary profit would demand, none of the evils which have been mentioned could occur. It would be as well for a housewife never to sweep her kitchen nor wash the utensils, and to allow a general accumulation of refuse matter for the whole season, as for a farmer who has built a barn for his cattle, to give them no further attention than food and drink only. The great leading axiom in husbandry, which applies with its fullest force in this instance, is, that *profitable* management requires a constant and full expenditure of care and labor, for a thorough and finished performance of every operation; and that carelessness and neglect is very much like the Indian's rule, "poor pay, poor preach."

* * *

[For the Country Gentleman and Cultivator.]

Feeding Sheep for Breeding Stock.

As you open my sheep book, you find the motto written "Vigor and Vitality." This with me is the foundation; without it all other valuable points are of little moment in an animal for stock breeding. While it may be an easy matter to follow a standard rule in judging of manufactured and other articles at our Agricultural Exhibitions, no mere tape measure can ever decide on the merits of stock animals. The great mass of lookers-on will probably admire the great size and fatness of some particular animal; a few more wise, perhaps, will see his superior in another animal, because of the great length of his pedigree; but one in a thousand may pass that way with an eye drilled to discover defects, who quickly decides in his own mind that neither animal is what he should be for a stock getter—not because it lacks a printed pedigree or size, or yet many valuable points, but because it may lack the essence of all points necessary to stamp what extra qualities it does possess on its offspring, viz., *Vigor* and *Vitality*.

How often do we find writers describing improved stock, telling us, as one among many valuable qualities, of its sluggish disposition, therefore laying on fat rapidly. I imagine that the breeder who *builds on that foundation* will soon find himself possessed of a stock of animals that are poor feeders and miserable thrivers; and it would be no wonder if it did take three cows to keep one calf in condition. He who looks over his flock, and is pleased with their fatness and high condition—if he *therefore* concludes that his system of feeding is the true one—may not after all be the man that can succeed as a breeder of stock sheep.

Before, then, we can know if a system of feeding is right or wrong, we must know what end is aimed at. Having given some part of my system of management for butcher's lambs, I shall now notice some of the small matters connected with breeding sheep for stock getters. My prominent aim being, as above stated, to secure vigor and vitality, the question arises, how shall I keep my breeding ewes? Is it best to keep them stuffed, pampered, and fat, or just in fair thriving condition? I am not now writing to prove that my system is right, but to add a little to your recent editorial remarks on my management, and give some of the reasons why I manage as I do. I would ask my readers to look at my sheep; I am willing that they should decide about the right or wrong of my management. My plan is to keep my sheep in the open air, except in case of wet weather, believing that while it may take a little more food out in the cold, it does them no permanent injury, but rather good. If I see it giving them a keen appetite, I feel entirely satisfied that all is working well, but the fear of dogs, and deep snows, compel me to put them in yards at night, and sometimes for weeks together through the day, if the snow is very deep. Still I would much prefer to have them wandering over large fields, than confined, even in yards with shelter on the north.

While I prefer not to give breeding ewes any roots or grain before lambing, yet if they are not in good condition and heart, I think it a good plan, attended with no evil consequences, to begin two months before lambing with one gill of oats per day, increasing to a half-pint for two weeks. Still I prefer to have my ewes kept on hay and cornstalks, as they are in plenty high enough condition, without the grain. And while I feed my ewes no roots before lambing, if they could not get to the ground to get a bite of grass, and had to be confined for some time, I should not object to giving about one or two pounds per day, for the sake of keeping the ewes in condition, but by no means to increase her milk; and this is the point why I object to roots until the lambs are two weeks old. I believe too much milk injures the health of the lambs.

Beginning now with the lambs, I have a different object in view, and must use a different plan from butcher's lambs. If you wish a child to continue healthy, with *good digestive powers*, will you feed it pound-cake? This question about answers all I need say about feeding lambs. I wish to keep them growing fair, but not to fatten them. I give no feed until eight months old, and even then very light—say a little wheat bran and oats; but while I object to grain feed, I would not spare green food, and like a little rape ready by October and November—then plenty turnips until February, then sugar beets until June, then grass and clover until rape and turnips again,—giving grain very sparingly unless I should not have plenty of roots. Then I should give grain sufficient to keep them in good growing order.

The above plan refers to the ram lambs, while to the ewe lambs I only give half the allowance of roots. My reason is, the rams need to be in very strong condition for work, say in October—thus being more likely to impress their good qualities on their get; and if not in pretty high condition, they would not get through their work in fair order for wintering well, without too much grain feed. The young ewes in October have none of this work, but on the contrary are growing very fast on grass, and, in general seasons, will continue to do so up to December. As soon, therefore, as grass comes in spring, I turn my ewe lambs out without any more roots, and keep them on poor pasture through the summer, and even then they get in plenty high condition.

Since writing the first half of this article, spring work has come upon us with a rush, so that I was obliged to abandon my plan of treating this subject at length, and have barely glanced over it as above. Commencing with a stock possessed of great vigor, I am willing to stand or fall on my plan of breeding and feeding; yet, being but a learner, I am watching for any better way, and hope sheep breeders will not be backward in criticising my plan.

While it is possible to give exact rules in managing sheep, it cannot be so in BREEDING. The skillful painter so mixes his colors, as to give beauty that no written rule could produce; and so the skillful breeder crosses opposite qualities to produce perfection, that no printed plan, however well followed, could attain. J. C. TAYLOR.

Holmdel, N. J., April, 1862.

[For the Country Gentleman and Cultivator.]

DEFECTIVE HORSES---TRAINING.

The Co. GENT. of April 17, contains an inquiry by D. B. in relation to a mare of his, who has "acquired the habit of *pounding* her knees when driving fast, causing soreness and swelling." I do not catch the true meaning of the term "pounding." Does she strike her knees with her hoofs or shoes, or strike her knees together? I do not understand that her manner of "throwing her weight into her feet," (to use a vulgar though expressive phrase,) causes her knees to swell from the concussion. If this is thought to be the case, you will probably find that her *feet* have inflammation, and this is merely an *extension* of it. The feet generally fail first. If inflammation is present in both feet, as in all likelihood it is, you may have failed to perceive the difference in her gait. Notice the *heat* of her feet after she has been in awhile; wash both in cold water, and see if they *dry about the same time.* Take her shoes off and examine for *corns*, (an indication merely of inflammation, i. e., soreness.) But I do not believe it is this. However, let me speak of *how to cure the inflammation*, and touch lightly upon the other causes—striking her knees with her hoofs or shoes, or knocking her knees together. Before she gets over the soreness and swelling, you will have time toexplain more in full; also, admit us into the treatment adopted, and its results?

This soreness arises from fast driving, so do not adopt that gait until all vestiges have disappeared. The mare must be put upon low diet; hay and wheat bran, I prefer. Wet the bran with *boiling* water; let it stand *covered* until warm, when feed—twelve quarts of bran in three meals. This will have a tendency to open her bowels. Keep a good bedding under her at all times. Some say bedding is injurious. No facts support such an assertion; if any, would like to hear of them. Wash the knees with cold water, and bathe with tincture of arnica. A *loose box*, letting her head free, is preferable to a stall. If you keep her in a stall, give a little exercise in the morning and afternoon. Do not give too much; err on the right side. Stuff the feet with cow manure (for its wetness,) or wet oil-meal—in fact, any thing that will keep them damp; tow, kept in by small sticks inserted crosswise of the shoes, and kept always wet, is as good as anything. A separate stall, with a box filled with mud, would do quite well; but I would prefer the straw stall and stuffings. Be sure and keep the feet soft however.

Now for the other considerations. Horses often strike their knees with their hoofs, because their legs are formed outside of trotting requirements. If this is the case, we cannot change nature when she has such a foothold. Horses with well-formed legs are apt to cut themselves when urged too *quick*, not *fast*. If he is high acting he is apt to cut when becoming tired. Here the remedy is apparent. Colts are more liable than horses. Good formed and well actioned horses often cut their knees when improperly shod—feet left *too long and wide.* He may become, nothing unusual I can assure you, tender footed, and then he is liable to cut. Again, a great deal depends upon the driver when the horse is at full speed. When he is going at a rapid rate of speed, a tendon may be *strained*, and then the legs and knees swell. Besides these, there are many other causes, and somewhat similar. The above causes often produce *knocking of the knees together.*

The *first thing* to look to, is the condition of the feet. For New-York pavements you do not wish your horse's feet to be in as soft a condition as we do in the country; neither do you need that extreme paring of the inside of the foot, so often met with. Plain shoes for training, according to my notion. If you are wishing to develop the powers of speed in your mare, you must have regular hours for exercise. When you "speed" her, do so by "brushes," as she is young. Drive every day, but do not "slam" her; short "spirts" are the only keys to success. I happen to be situated as you are about developing speed in a young mare. I practice what I preach in this respect. My mare likes to "spirt off," and it makes her enter into it with determination and energy, whereas if she expected—and they soon learn—a long "swing," she would not do near as well for that particular time, nor improve as fast. Speed in the young, and "stay" in the older. Drive slowly when you are not "sending" her. You cannot make a "trotter" and a roadster at the same time. Their motion is different. Their training must be at variance. Plenty of light, fresh air, good solid food, good and careful grooming, and sufficient walking exercise, with frequent "spirts" of speed—their length depending upon many collateral considerations—provided all things else are favorable, make trotters.

Rose Hill, N. Y. ONE WHO HAS TRIED IT.

[For the Country Gentleman and Cultivator.]

MILDEW ON ROSES.

It is said by those who have been troubled with mildew on their roses, that if they are well syringed with lager beer, it is a certain remedy for it. One of the finest collections in the country was saved by two applications of it after all other means failed. C. B. M.

THE SUMMER DROUTH.

The present state of a considerable portion of the Northern States, suggests some remarks on summer douths, their effects on different soils, the remedies and preventives within our reach, and their advantages in regard to the destruction of weeds and the amelioration of the soil. There are *two* sides to the picture—we may, after dwelling on the glare of the darker, turn to the more genial phases of the former, and find some consolation.

Seasons of drouth of more or less severity, are of frequent occurrence in our climate. Weeks and even months pass with little or no rain; the scorching glare of the sun drinks up our summer brooks, and turns the fields to dust or brick-like clods, beneath its influence. The growing crops are shrivelled and dwarfed by the heat—if it occurs early, as this year—late planted crops find insufficient moisture for germination. The meadows yield a light product, and under the continued want of rain, pastures are as brown and bare as in the earliest spring-time.

But drouth affects not every soil alike. There are some luxuriant crops, when many fields cry visibly for help from heaven. These invariably occupy the porous friable soil, that has been deeply cultivated and highly manured, or if a hoed crop, one which is frequently and cleanly cultivated. It is well known that one of the most effectual preventives, (if not the only preventive) of the effects of drouth on crops, is a fresh and mellow state of the soil upon which they are growing. This can be attained perfectly but in one way—by thorough and frequent stirring and cultivation—though it can be greatly promoted by a proper preparation of the ground before seeding. If land is deeply plowed and thoroughly pulverized, and at the same time prepared either by the nature of the subsoil or artificial drainage, for the ready passing off of all surplus water, it will remain for a long time in a moist and mellow state. But shallow tilled land, with a retentive subsoil, is always found to become comparatively sterile under the influence of excessive dry weather. A heavy rain falls, completely saturating the mellow portion of the soil; the surplus water cannot sink rapidly away into drains or a porous subsoil, but must pass away by evaporation, and the suface soil is sure to become baked and hard under this slow process. Or a like soil and treatment without rain, soon dries down to the hard-pan, and furnishes its crop little resource for moisture under a drouth.

What, then, is the best method of guarding against the effects of drouth? If the above reasoning is correct, deep culture and frequent stirring of the soil is our best resource. It is true that the evaporation of moisture is the greatest from a light soil, but it is also true that it receives moisture more readily and largely from all the sources which supply it. We find little or no dew upon the beaten path, when the grass at its side sparkles with dew drops in the morning sun. The fresh turned earth receives a much larger supply than that upon which a hard crust has formed; it penetrates much farther; is more perfectly absorbed, and hence passes off with less rapidity. This is true both of light and heavy showers.

To "keep the land free from weeds" is the panacea of the farmer, as it long has been of the gardener. The best product of corn and roots, of fruit and vines, are invariably those which receive frequent, clean and thorough culture. We have observed this fact, particularly in all reports of large corn crops, in every mention of thrifty and productive orchards, in accounts of the best and most profitable vegetable gardens—all were grown on a mellow, clean, deep soil. The want of rain seemed scarcely felt, while the products of shallow and weedy soils were much reduced in consequence. It is a matter of much importance to a growing plant whether it has its appropriate breadth of soil to itself, or whether weeds surround it, robbing it of the moisture and nourishment which should go to its support. Its roots and leaves should have room—should possess a monopoly of all the benignant influences of nature. A rich, clean and mellow soil is the best prevention of the effects of drouth, as well as the best security for good crops, whatever the character of the weather and the season.

On fertile soils the crops suffer less from drouth for another reason. They start early and vigorously, and spread wide and deep their roots, and send up broad and strong their stems and leaves, so as to take up a much larger supply of moisture, and from more extended sources. A plant with scanty rootlets, only a few inches in length, has far less power to sustain itself without rain than one with numerous roots extending several feet on every side, as is the case with most grains and plants in fertile mellow soils. We often see this illustrated—no farmer can have failed here.

A dry season presents a highly favorably opportunity for destroying weeds of all kinds, either in cultivated fields or pastures. Many of these "pests of the farm" die hard—though pulled or hoed up, they readily take root again in moist weather; indeed we have seen corn thoroughly hoed, as weedy as ever a week later from this cause, when with dry weather it might have been "laid by" with one hoeing. So, too, of cutting thistles, bushes, etc. A season of drouth will well nigh exterminate them if properly improved, with but slight labor. Gardeners prefer a dry season to a wet one for most of their products, as well for their better quality as for the greater ease in working and tending.

Dry weather, in bringing up moisture from the subsoil—a circulation of water the reverse of that which takes place in wet weather—brings up not only moisture, but all that it holds in solution. There are salts of lime and magnesia, of potash and soda, or, indeed, whatever the subsoil may contain. The water on reaching the surface is evaporated, but these mineral constituents remain for the use of future crops. They restore to the surface that which has been used in former years, and thus the drouth serves to restore and keep up the fertility of the cultivated soil, as far as derived from this source, and it is not an unimportant one.

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[For the Country Gentleman and Cultivator.]

FRUIT IN IOWA.

We had no frost in May to injure the fruit in this vicinity. Strawberries are now abundant at ten cents. There is about this town 400 to 500 bushels raised this year, to feed 10,000 people with—that is about 10 quarts for each family. The Wilson strawberry takes the lead in size, quality and profit. I have a bed of the Triomphe de Gand, ten days later than the Wilson, which appear to be growing very large, not yet ripe, but not as productive as the former. Apples a fair crop. Grapes are setting full, and the vine looks luxurious and healthy. This country will be well supplied with fruit this year—so it is improving from year to year in health. SUEL FOSTER.

Muscatine, Iowa, June 13.

[For the Country Gentleman and Cultivator.]

COUGH IN HORSES.

Messrs. Editors.—One of your correspondents asks for information respecting cough in horses. I once had the opportunity of observing two or three cases of this disease. I took the trouble to inquire as to where the horses were bred, and how long they had been heated. The result was that a hasty "hacking cough" (precisely similar to the kind spoken of) was traced to a neglected, or, as some people would call it, a badly cured case of strangles, otherwise known as colt glanders or horse distemper. Had the complaint been properly treated in the first place, no hacking cough would have remained. But the fact is, the treatment in such cases, though simple, is too much trouble, and requires too patient attention for many people, although if they could see their own interests more clearly, they might perhaps perceive that diligent attention in the beginning of the disease would produce the most favorable result in the end, even as regards the pecuniary value of the animal. In my humble opinion, derived from experience of cases that have come under my observation, the cough complained of has become a constitutional disease, seeing the horse was attacked with "distemper three years ago, and the hacking cough was left behind; *the horse has not got the heaves yet.*" I may be ignorant of much that I ought to know, but I cannot perceive the necessity of the horse having the heaves at all, if proper attention is paid to him. If proper attention is paid, it is my humble opinion that the cough, though it may not be absolutely cured at once, may be so controlled as that the horse may outgrow it. After the sound doctrine laid down in your paper as to the treatment, it would be unnecessary for me to say more had I not observed in the cases I mention that the disease was seated in the throat at that part commonly called the "throttle," "swallow," or kecker, the part usually squeezed by dealers to try whether a horse's wind is sound or not. This part will be more or less swelled, according as the cough is better or worse. In plain matter of fact, the horse is left with "*chronic sore throat*," which gives the hacking cough. I have seen very good effects produced by fomenting the parts well with warm water, and giving warm bran mashes. But in any case I would respectfully recommend that the animal's stomach should not be converted into an apothecary's shop; if drugs are administered at all, let it be a mild diuretic alterative, which any respectable veterinary surgeon would supply. This, with bran mashes and chopped straw, would materially relieve, if not entirely cure, the complaint. (The reason why a diuretic alterative is recommended, is one that I should suppose any veterinary surgeon would explain if applied to, as there is an intimate connection in some way with the action of the urinary organs and the organs of the throat, but I am unable to explain, not being skilled in anatomy, and have no work to refer to either, to gain the knowledge.)

I would further remark that horses suffering from this disease have a peculiar way of striking out their heads for the sake of breathing more freely as they travel. To relieve this, use no bearing or check rein, and buckle the throat latch loosely, so as not to pinch the throat. If it is necessary to keep the horse's head in, instead of the bearing rein, use a light strap running from the belly band, the same as a martingale but instead of rings for the reins to pass through, let there be buckles, so as to fasten into each side of the bit.

Shipton, near Danville, Canada East. RUSTICUS.

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[For the Country Gentleman and Cultivator.]

To Kill Lice on Stock of all Kinds.

Take 1 ounce of "cocculus indicus," which should be bought of any druggist at from 12 to 15 cents per pound, and steep it in 1 gallon of water, and apply as is recommended for tobacco extract. It will be found quite as effectual, and much more pleasant to use. I have used it with unvarying success for killing lice on canary birds. Dip them in, keeping the head out, and soak well. It is perfectly safe. A. B.

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[For the Country Gentleman and Cultivator.]

LETTER FROM JOHN JOHNSTON.

Near Geneva, 11th June, 1862.

Messrs. Editors—May on the whole was an unfavorable month for the farmers in this section; although we had several showers, it was always cold and dry afterwards, and neither grass nor wheat came along as it ought to have done, according to the prospect we had at the beginning of the month; and wheat has come in ear very slowly, and unless we have hot weather, we will have a later harvest than we should have to escape the midge. Last week I made a vist to the Hon. George Geddes. I had never been on any of the farms in the neighborhood of Syracuse, and I assure you there are many as good farms there as can be found anywhere, and many of them appear to be very well cultivated; and they keep far more sheep than I expected so near a large city. All I saw were of the Merino breed, and I never saw as many sheep in one neighborhood so good; they are well fed, and first-rate sheep. I saw the wool from a flock recently shorn, that averaged 6½ lbs to the fleece, (washed wool;) it was fine, and in very good order. I saw three of Mr. Geddes' rams shorn—one a yearling, whose fleece weighed 16½ lbs.; the other two were elder, and theirs weighed 16¾ and 17¾ lbs. These rams were not washed, but were very clean for unwashed wool—in fact, after it was rolled up, unless it had been handled, one would have supposed it washed wool. These rams were Silesian Merinos, which Mr. G. seems to think the best breed of Merinos. Since I left there I have thought they must have been housed since last autumn, else the wool could not have been so clean; but it did not occur to me at the time, or I would have made the enquiry. Mr. G.'s wheat was much about the same as our wheat here; his pastures were luxuriant—far too good in my opinion; for when the sheep wade through grass up to their bellies and farther, I never saw them do well, especially before shearing—their greasy wool gives the grass an unpleasant smell, and they don't thrive on it as they would do if they had been turned out earlier and the pasture kept short. His meadows were excellent. Everything is looking well in that neighborhood; the soil must be equal to any we have in the State.

I was on the farm of our friend E. Sherrill, Esq., the other day; he will leave his mark behind him as a tiller of the soil. His corn is admirably tilled, none better I ever saw; and every thing he is doing, is done in the best manner. His farm never had the name of being a good one for grain, but I believe the truth is it was never half tilled. Mr. S. has improved it wonderfully in the two years he has owned it.

We have it warm now, and corn grows, but it came up badly on clay soils unless highly manured. Mr. Geddes makes an immense quantity of manure, but I don't think he appreciates it as much as I do; he seems to think clover and plaster the sheet-anchor of the farmer. I can get plenty of straw with clover and plaster, but I must have dung (I suppose I should say ammonia,) to get a full crop of grain. John Johnston.

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Profitable Farming.

The attention of those farmers who believe that "farming doesn't pay," is called to the experience of Samuel Graves of Hatfield. He owns a farm of 35 acres, and in 1861 he raised ten tons of tobacco, which he sold for $2,200, sold $160 worth of tobacco plants, raised 650 bushels of corn, 200 bushels of potatoes, 54 tons of hay, fatted 200 sheep, on which he cleared $400, and $65 worth of pork. Besides himself and boy be employed two hands, one through the summer, and the other the year round, at a cost of $300.—*Northampton Free Press.*

[For the Country Gentleman and Cultivator.]

Best Way for a Young Man to Get a Farm.

Results of Personal Experience.

MESSRS. EDITORS—Mr. J. W. COLBURN of Vermont, says, in Co. GENT. of March 13, page 178, that "he has read with considerable interest the lengthy communication of F. of Orleans Co., in Co. GENT. of 23d and 30th of Jan. last, pages 59 and 74, describing the best way for an ambitious, energetic young man, starting in life without property, to get a farm, &c." I also read those articles with a good deal of care, but with all due deference to Mr. Colburn, also for F., I beg leave to dissent from their views as expressed in their communications, and take the middle ground, as spoken of in the articles referred to, and shall advocate it, and advise such young men as Mr. Colburn speaks of to adopt that plan in getting a farm.

Let us briefly look at the qualifications mentioned. He is to be ambitious and energetic. Now we suppose Mr. C. means a laudable ambition, such as is becoming any young man to possess, and energy also to persevere under difficulty (if need be;) and in his closing sentence he adds, "What man has done, man may do again." Also "that it requires the determined will, the energetic hand, the unremitted perseverance, and the patient, long enduring application, and almost any object legitimate and honorable in its end can be reached."

Such then are the qualifications, if I rightly understand Mr. C., that the young man wishing a farm must possess, and such Mr. Colburn advises—in order to become the owner of a farm in the shortest possible time, to work out by the month on the farm for a period of from ten to fifteen years, as circumstances may require; and to substantiate his position he quotes the following sentence from F.'s communication in Co. GENT., page 74: "F. gives us an instance of a man that died worth $10,000 in cash, who made it all but a small legacy by working out, and the interest on his money. Another that is 36 years old, that has between $3,000 and $4,000, all made by working, and the accruing interest on his wages. And yet another that saved $900 in six years." Mr. Colburn then says: "These cases show most conclusively that working out on a farm by a young man starting without means, who is determined to own a farm, is the shortest and surest way to accomplish that praiseworthy and desirable object." Also he adds—"Had either or all of these cases detested working out as many young men do, and got married at the start, and relied upon taking farms upon shares, or upon running in debt for a few acres, think you at the same period in after life they could have shown these results?" Mr. Colburn then answers the question decidedly in the negative, saying—"I tell you they could not, but probably would have seen an old age of destitution and want.'" The language used by Mr. Colburn is very strong and decided, and perhaps it may be considered presumption in me to gainsay it. Viewing it in the light of my own experience and observation, I consider his views, as expressed in the answer quoted, as containing errors, and calculated to mislead those whom he desires to benefit by the advice given in his letter from which I have taken the extracts already quoted, as published in Co. GENT. of March 13th; and relying on Mr. Colburn's forbearance towards one who may differ from him in opinion, will briefly give my views on the subject.

F. does not say that the men mentioned made the sums credited to them by working out on a farm as farm hands, although Mr. Colburn assumes as much, and the price mentioned by F. in his first letter, when he quotes from Mr. Colburn's previous writing, at $15 per month for the year, is higher than the average in this county for the past 20 years. I think $150 per year is full an average for the best hands for the time mentioned; some of the time above, and some below that price, some not getting that price; but we are talking of the ambitious and energetic young man who is determined to become the owner of a farm in the shortest possible time, who has to earn it by his own labor.

We see from what has been written by F., and also by Mr. Colburn, that from 100 to 150 dollars per year can be saved by such men under the most favorable circumstances; probably $120 would be more than an average in the cases that have fallen under their observation, and in this vicinity it would be under that estimate.

Now we will look at the other side of the picture, keeping in view in the meantime the qualifications that the young man must possess. We will suppose him to be 21 years of age, with good health, and all the requisites mentioned by Mr. C., and that he has formed associations with some young lady of his acquaintance, who also possesses the same qualifications, but she also is without means to purchase a farm, although that is the object of their ambition, to attain which they are ready and willing to unite their interests in the realities of wedded life, and commence in earnest to acquire the desired object. In the light that Mr. C. views it, they will probably fail; but viewing it in the position that I take, they will succeed, and much sooner than they would if both worked for wages, having the same end in view, viz., a good farm.

Such a couple can easily secure a good farm on shares from a good landlord in this State, and probably in most of the States of the Union, and instead of saving $100 to $150 per year, can, with the blessings of Providence, lay by from $300 to $500 per year, with more advantage on their side than to remain single. For instance, if they remain single, and are sick, all income is stopped, while if either is sick when married, and on a farm, crops and animals are still growing, and there is one (if only one is sick) to look to the interests of both. Besides how much more congenial to human nature to have a companion to share with each other our joys and sorrows, either in prosperity or adversity. Also what young lady of the qualifications mentioned would not prefer to join her destiny with a young man of like qualifications at once, and begin the great battle of life in earnest, and having conquered, as they surely will, all obstacles at the age of 30 or 40 years, look back with pleasure upon their commencement and struggle for a farm, and feel that with their united efforts, with the blessing of a kind and heavenly Father resting upon them, they have succeeded beyond their most sanguine expectations. Perhaps too at that age sons and daughters may have grown up around their fireside to gladden their hearts, who will soon go forth in the wide world to conquer the obstacles, either real or imaginary, that may arise in their path. Think you there would have been as much enjoyment and genuine home feeling had they remained single in the meantime? I think not; I have in my memory at this time numerous instances, such as I have mentioned, when at less that 50 years of age persons that were married in early life, and have worked farms upon shares, have made their thousands and purchased farms of their own, and are still in the prime of life—also some that have told the writer of this that they did not want to own a farm, as they could make more money in working land belonging to others than to be the owners themselves.

Such have been my observations while engaged in working out the problem for myself, for at 18 years of age my prospects in regard to property were dark enough (my father having died 10 years previous without property; consequently myself and mother were left to rely upon our own exertions for a livelihood.) For three years I worked out on a farm for wages, that is from the time I was 18 years old till I was 21. I will not say that I had the qualifications mentioned by Mr. Colburn, but I may say that I saved what I earned, and tried to do my best for my employer. At the age of 21 years I made arrangements to take a farm with a view of purchasing. Soon after I married a young lady that knew my circumstances, and that the farm had to be earned if we ever wanted one. We commenced in earnest. Before we were 30 years of age the desired object was attained, and we were better off in dollars and cents than the cases cited by F., which

Mr. C. quotes; besides we had been at home all the time while we were engaged in paying for it.

As for the expenses absorbing all the income in working a farm upon shares, as mentioned by Mr. C., that has not been the case with those of my acquaintance. The expenses in such cases with such a couple will be light, and they will save from $3 to $5 in such a situation where but $1 would have been saved by the working out system.

Now I do not deny that many young persons will fail to accomplish the results I have stated; but such would fail if single, not having the required qualifications. I could mention cases where, when single, not a dollar was saved, when as soon as the same young men were married their earnings were saved and a competence was the result in a short time.

The expenses of a family are never so light as at the commencement, and any young woman with the qualifications to match the young man, as given by Mr. C., will, instead of adding to his burthens, lighten them in very many ways, which I need not mention at this time; besides he will doubtless have the blessings bestowed on him, designed by his Creator when he said "it is not good for man to be alone," who also created "an helpmeet for him." There is no doubt but the same injunction is now resting on the human family as in the earliest stages of the world, and we shall do no wrong by heeding the injunction.

In conclusion I would advise all such young men as mentioned by Mr. Colburn, and all others that think they have the qualifications mentioned, that the sooner they get married after they arrive at the age of 21 years, and a suitable situation offers to take a desirable farm, the sooner they will become the owners of such a farm for themselves; and that instead of a young woman being an encumbrance, as Mr. C. intimates, she will be a real help, and they will save from their united earnings in the ratio I have mentioned; besides she will be a sharer in his joys, and grief if he has any, which he doubtless will, as trials are the common lot of humanity. She will also cheer him on in all his successes, looking at the object to be attained on its brightest side, thus proving most conclusively her ability to perform her part in the task they have allotted themselves—which, with God's blessing, they will surely accomplish. JONATHAN TALCOTT. *Rome, March* 20.

[For the Country Gentleman and Cultivator.]

Removing Extra Teats from Cows.

I read recently an article on extra teats upon cows being removed by twisting a wire tight around the teat. The circulation was thus stopped, and in two or three weeks the teat dropped off—which I think must cause the cow considerable pain. The practice in some parts of England, is to examine the calf soon after it is dropped, and if there is more teats than usual, take a common pair of house shears and clip off the end of the extra one. This causes but little pain, and will be well in two or three days. They there consider these extras, if left on, to have a tendency to crowd the useful teats closer together, and spoil the shape of the bag. H. H. S.

[For the Cultivator and Country Gentleman]

How to Prepare Seed Corn to Protect it from the Depredations of Crows.

Take half a bushel and put it in a basket—pour half a pail of cold water over it, or sufficient to wet it. Then remove it to a tub, or some other vessel that will hold double the quantity—put on about one gill of secesh tar, stir it with a stick till it becomes coated—then put on plaster sufficient to dry it off, rubbing it with your hands to separate it ready for planting, and according to my experience of some ten years, you will have no need of scarecrows. ALBERT VAN VOAST.

Pond Grove, Schenectady, N. Y.

WHITEWASHING SHINGLES.

Fresh or caustic lime, applied during the heat of summer, and after the wood has become thoroughly dried, enters the pores, and tends strongly to prevent decay. We have recently examined a board fence, which had been whitewashed in successive coats about 18 years ago. The boards were hard and sound, and had not become covered with moss, as was the case with another fence near, built at the same time. There is no doubt that a great advantage would result from whitewashing shingles before laying them. We have on a former occasion, given some instances of the durability thus imparted to them. A late number of the Boston Cultivator gives some additional examples. J. Mears of South Abington, performed the experiment in substance as follows:—He procured a vat, (a lime vat at a tannery does well,) and applied salt with a small portion of potash to the lime, and immersed the shingles for four hours. The wash was afterwards brushed over the shingles when laid. This made a fire-proof roof on a blacksmith shop, now eleven years. Silas Brown, another correspondent, says that 25 years ago, he dipped shingles in a large kettle of lime wash to which salt had been added, and the whole kept boiling. A few shingles were dipped in all over at a time, long enough to soak them well, and then thrown aside to dry. In a short time all the shingles were thus prepared. Although what are termed "sap shingles," they have now lasted 25 years, "and may do so for years to come." Several experiments of a similar character have been made since, with very successful results.

Recipes for Hard and Soft Soap.

A correspondent in the *Germantown Telegraph* offers the following recipe as one to be perfectly relied on:

Take ten pounds of soda ash, and dissolve it in twenty gallons of soft water, with twelve pounds of fresh lime and three-fourths of a pound of rosin, by boiling them all half an hour, stirring the while to keep them from setting or burning; then pour all the contents into a tub to settle, washing your kettle clean. After these contents have settled, take the clear water that comes on the top and put it in the kettle; now hunt up all your fat and skins till you get about twenty-three pounds—if clear fat not quite so much—put over the fire to boil till all the fat is eaten up; perhaps it will take two hours, or not nearly so long; then take fine salt to divide, and add salt till the hard soap comes on the top. It will at first look like froth, and the waste will look very dark in the bottom of the kettle. Pour all out in a tub. I forgot to say, fill up your tub with cold water after taking off the first clear lye, ready to boil your soap-froth with the second time; put two good bucketsfull of this clear lye in the kettle, then with an iron ladle take all this soap froth off the top of the tub and put it in with these two buckets of lye-water, to boil again a few minutes, to make your hard soap clear and nice, adding salt till it separates well. Then pour all out in a tub, to remain undisturbed over night. In the morning you will have over thirty pounds of as nice white soap as you will wish, for either washing or toilet use, which will not chap the hands at any time. Again, if you would wish a half barrel of nice white soft soap, fill up this said lime tub again with cold water till it settles, then take the hard soap that sticks to the kettle and the pitcher that you dip out with, and three or four ladles full of your hard soap, with two pitchers full of this lye-water, and let it boil a few minutes till it looks like soap, then fill up your kettle nearly full of the lye-water, and let boil a few minutes, then pour it out into a vessel, and you will be much pleased with the result of your labor. This soft soap will be thick and solid, and it is very nice for boiling clothes or washing, as it makes a very nice froth.

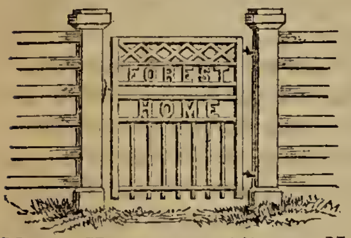
In order to have plenty of soap fat, you must begin at the beginning to save all the skins of meat, and all the fat scraps that come from your table, which, in warm weather, should be put in some of this clear lye until you get enough to make some soap. By this course, in an ordinary family, you will always have enough soap without buying.

☞ The Annual Exhibition of the Provincial Agricultural Society of Canada East, for this year, is to be held at Sherbrooke on the 17th, 18th and 19th of Sept.

[For the Country Gentleman and Cultivator.]

DESIGN FOR A SMALL GATE.

A neat and tasty entrance gate is a most desirable ornament to a country place. We say *ornament*, because a good gate is as much an object of beauty and attractiveness as almost any feature of the premises; and certainly no one thing gives such a repulsive and forbidding aspect to a yard or home as a miserable, dilapidated gate. Let those readers of the Co. Gent., who have it at hand, turn to page 126, vol. II, of Rural Affairs, and notice the contrast in the gates represented, and they will at once see that the *gate*, is, to a great extent, the index of the dwelling and the social life within its walls. A neat entrance gate gives evidence of refinement, good taste and contentment; and on the contrary, a shattered off-at-the-hinges one, is a sure sign of poor management without and unhappiness within.



The accompanying illustration is designed to show a very neat and desirable entrance gate for foot paths to front yards which come near the highway.

Upon the grounds of E. P. Prentice, Esq., at Mount Hope, near Albany, N. Y., there are several gates differing in some particulars, but essentially like the accompanying engraving. I remember the names of "Jessie Cottage," "Hope Cottage," and "Swiss Home," as some of the names upon the entrance gates of the residences at Mount Hope, as I noticed them during some of my summer walks to "The Abbey." I was struck with their neat appearance, and hope many such gates will be erected throughout our land the present season.

The gate is built of wood. The letters forming the name to be placed in the gate, are also made of pieces of wood one inch square, and cut into the desired lengths. In this way any letter and name can be formed with but little difficulty. If the owner chooses, his own name can be placed in the gate instead of the name of his residence, although the latter is preferable. S. L. B.

Brookdale Farm, Maine.

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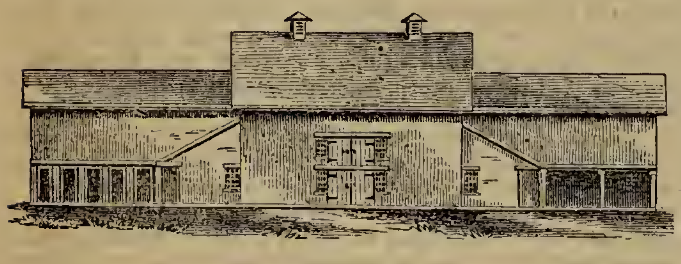
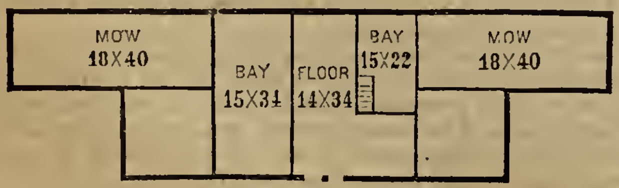


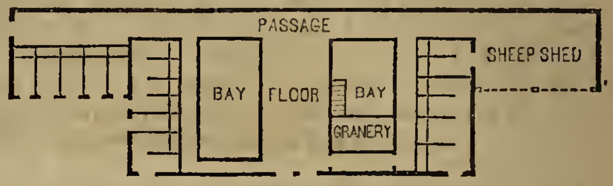
DESCRIPTION OF A BARN.

Our correspondent, L. B. Carroll of Bangall, Duchess county, sends the accompanying design of a barn built by him a year ago last summer. He does not inform us of its cost,—an item of importance to all farmers who erect buildings,—but we suppose it to be about $1,100 or $1,200, if well built of rough exterior boards, or $1,500 if planed and painted.



Floor above Basement.

It is a grain, horse, cattle, and sheep barn combined. The main building is 34 by 44 feet, the wings each 18 by 40 feet, with a leanto in front of each 16 by 16. The posts are 13 feet above basement. The basement is 7 feet in the clear. The bays extend down to the basement floor. It is so arranged that the feed from the "mows" as well as from the "bays," is thrown directly into the feeding-space in front of the stalls on each side of the barn; the upper floor being kept for threshing. The grain, when cleaned, is let directly into the granrny below.



Basement Floor.

Dimensions.—The passage in front of the stalls of the left wing is 6½ feet wide, the manger 2½ feet wide, the left stall 6 feet, and the four others 4½ feet. At the end of this row of stalls, and at right angles are five each 4 feet wide, and two ox-stalls at the corner, each 4½ feet wide. The feeding passage in front of these is 4 feet wide. The left bay is 15 by 25 feet—the floor 14 by 34; the right bay 13 by 15—the granary 12 by 15. The horse stalls on the right are each 5 feet wide, except the two nearest the sheep shed, which are 4½ feet. The open shed for sheep is 18 by 24 feet. The passage in the rear of the bays and floor is 5 feet, including sill.

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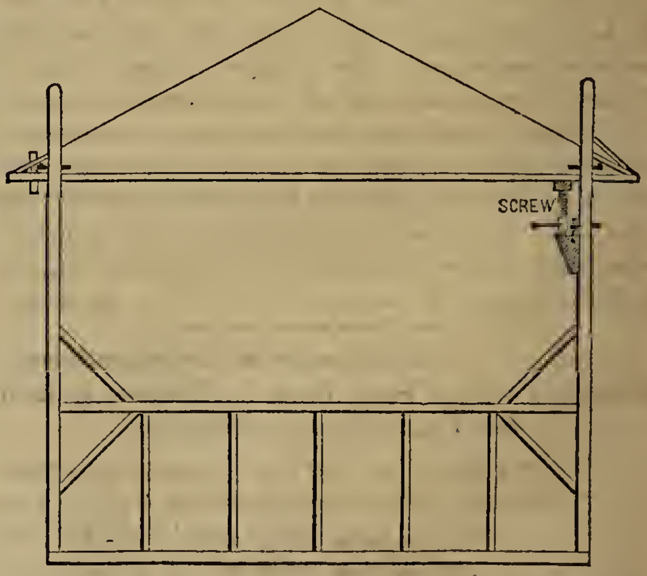
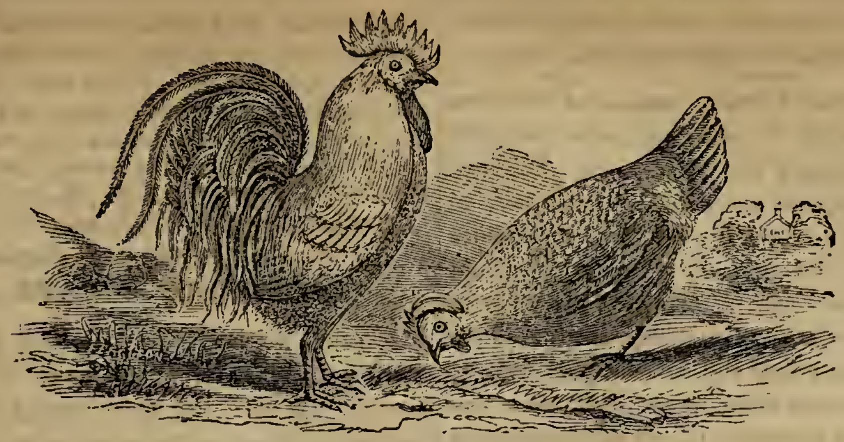
[For the Country Gentleman and Cultivator.]

CONSTRUCTION OF HAY BARRACKS.

The old fashioned barrack, as it is called, is built twenty feet square. Four posts of durable timber, twenty-two feet long, four feet to be inserted in the ground. The stick should be sufficiently large to square eight inches—the corners hewn off, making it partly octagon in shape—one and a half inch holes should be bored through the corners of each of these posts, one foot apart, for the bolts that support the roof. They should be made of one and a half inch iron, one feet in length, the outer four inches to be squared and turned up one inch, on which is laid a piece of joist, three feet long, to support the roof. The roof should run to a point from each side, and may be covered with shingle, tin, or thatched with straw.



There are four plates framed together, and braced. The posts pass up through the roof on the inside corners of the plates. The roof is elevated and lowered with a small screw of wood or iron, about two feet long. A wooden screw three inches in diameter will answer. This is used on the inside of the post. One man can raise and



LEGHORN FOWLS.

These fowls derive their name from the port of exportation, but we have no doubt they came originally from Spain. Dixon says, "the Spanish breed is, in all probability, of ancient and remote origin." In North Devon they are called "Minorcas;" others call them "Portugal" fowls. In Cornwall they go by the name of "Andalusian," but neither term removes them far from their old established location, if not their original home.

Dixon also says, "In England there are two varieties of Spanish fowl, the black and the grey, or speckled, the the latter being of a slaty grey, with white legs." In Spain there must be many varieties, as in an importation in 1847 it is said "there were speckled, black and white, and pure white and grey, in shape and carriage exactly like the black Spanish, only wanting the white cheek patches."

On a recent visit to the residence of Mr. William Simpson, Mott Haven, we were shown by his son, Wm. Simpson, jr., a small lot of what he termed Leghorn fowls, which, in style and figure, are well represented in the portraits at the head of this article. There were two cocks and several hens with pure white plumage, and a few hens of a gray or Dominique color. The two cocks are white, with large, single, upright, deeply serrated combs of the most brilliant scarlet, with large long wattles of a proportionate size. The hens resemble the black Spanish fowls in form and general appearance, with a large serrated comb falling over on one side. This mark of contrast of white and red make the head of the Leghorn cocks as handsome as any other variety, and can hardly fail to be a satisfactory and desirable every day fowl. They are, both cocks and hens, of less size than the popular white face black Spanish. As layers they are esteemed fully equal, if not superior, to any of the best egg-producing, non-sitting fowls, and are considered a most valuable as well as beautiful addition to our poultry yards.

We have been informed that there are quite a number in this neighborhood, which some of the dealers in the city have sold for white Spanish.

In the yard of a gentlemen who has some of the finest and purest white-face black Spanish fowls, we noticed a perfectly white Spanish hen, possessing all the characteristics of the family. He said she was hatched from a clutch of eggs produced by his imported prize hens. In her first feathering he tells us a few patches of black feathers appeared on the after and under part of the body. Her legs and bill slaty blue. On her second month the black feathers disappeared, and were replaced by pure white. But the most singular thing of all was the change of color in the bill and legs, which happened after the second month. At first it was noticed in the legs as gradually fading into white; then the bill followed in the same way, when they both became white, face, ear-lobes, and all. This we believe to be merely a freak or sport of the white-face black Spanish breed, as all her produce are true in color and characteristics of the family.

C. N. BEMENT

[For the Country Gentleman and Cultivator.]

REMEDY FOR LICE ON FOWLS.

"A Reader," page 352, inquires what will kill hen lice. I can tell him. Scatter sassafras bark, in small pieces, about the nests, and get sassafras poles for the hens to roost upon. The bark of this wood is fatal to this troublesome vermin. Drop one of them upon a piece of it, and it will die almost as soon as if it had been dropped upon hot iron.

My chicken house was overrun with lice. I tried the above remedy and have seen none since. My neighbor was similarly afflicted, and similarly relieved. N. Sargent.

Washington, D. C.

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lower the roof if it is done as fast as the hay is put in or taken out. Raise each corner of the roof one foot at a time, going regularly around the barrack. The roof will not be likely to blow off, if the above directions are followed in building. The posts, as far as they enter the ground, may be left the full size of the stick.

The best way to build a barrack, is with sills and girts seven feet from the sills, and braced. You can fill it from the ground or hay poles on the girts, and have shelter under for sheep or cattle. I make a rough sketch of a frame barrack, side view, which is given above.

Millerton. J. D. KERLEY.

[For the Country Gentleman and Cultivator.]

WINTERING CATTLE CHEAPLY.

Messrs. Tucker & Son—I have read with a good deal of interest during the past winter, various articles in your valuable journal, on the subject of cornstalks—as to their value for fodder, and as to whether it "pays" to cut them or not. As practice is at all times better than theory, I would like to state for the benefit of those who are non-believers in the practice of cutting stalks, a fact of hwhic I am cognizant. A few days since, I saw the cattle on the farm belonging to one of my neighbors—fourteen head in all—and in as good order as any one, even our old friend J. J., near Geneva, could wish them to be—in fact some of them would pass for beef with some people—and all kept since fall up to the 1st of April, on four loads of stalks, cut and crushed by one of Hickox's stalk-cutters, in a short time by steam power. This, wet up with fifty dollars worth of bran, bought in New-York at last summer's prices, constituted their entire feed during the whole time. By this means all the grain and straw has been saved for other purposes—perhaps to be exchanged into what your venerable correspondent calls "fire-fanged" stuff, but which we term York manure—and profitable to purchase even at that.

Perhaps I ought to state that there were four or five yearlings among the stock. The rest were cows and oxen. Long Island.

[For the Country Gentleman and Cultivator.]

Manufacture of Sorghum Syrup and Sugar.

Messrs. Tucker & Son—I send a sample of Sorghum Sugar, which was obtained by dripping some very fair syrup through a coarse bag, a few weeks since. We have made some, four seasons, and find that it is necessary, to make good syrup, that the juice should be cleared before the boiling commences, and that after clearing it should be boiled rapidly in a thin sheet. Our first plan was to fill galvanized iron pans four or five inches deep, and heat the juice to the boiling point, and let it stand without boiling a short time for the scum to rise, and then boil down quickly, and keep skimming off all the green scum as it rose.

Last season we had a pan, shaped like the letter L., the long arm six feet by two, and the short arm two feet square. The flue was under the long arm, so as to keep the juice boiling the whole length, but the short arm being off the fire, the juice would be at the boiling point, but would not boil in it. The juice flowed into the short arm through a spigot, to regulate the quantity, and the clarified juice was drawn off at the farthest corner of the pan from where it entered, into the finishing-pan, which was along side on a separate flue. The juice was kept about an inch deep in the clearing-pan, and by flowing in a small stream into the hot juice, the feculent matters contained in it are instantly separated from it and float on the surface, while the higher level of the juice in the main part of the pan, caused by the ebulition, confines the scum in the quiet corner, where it is readily removed.

Our mode of skimming is with a flat board, with a handle on the back. On pressing it down on the scum, it adheres to it, and is scraped off with a straight-edge.

The clarified juice was boiled down in the finishing-pan, in as thin a sheet as we could manage.

Nearly all the sorghum sugar I have seen, has had more or less of a gummy character. The specimen sent is nearly if not quite free from it. The only thing used to clear it was a small quantity of bisulphite of lime. Belmont Co. *Ohio.*

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[For the Country Gentleman and Cultivator.]

Personal Experience in Earning a Farm.

Having read in the Country Gentleman sevaral ways for a young man desirous of obtaining a livelihood by farming to do, I thought perhaps a few ideas I might suggest would not be out of the way. Although young and inexperienced myself, in the ways of working and by the means of which a farm is obtained, I have often heard my father speak of his experience, some of which I will briefly relate. At fifteen years his mind was fully made up to be a farmer. To that he devoted his energies, and boy though he was, was fully assured that he would never have any other vocation. At eighteen he bid adieu to father and mother, and started with nothing but an axe, which was all the kind parent could give but his blessing, and a piece of bread and cheese from the thoughtful mother. He left the parental homestead, traveled thirty miles, there found employment, and from that day to this never has known want. For the next five years he labored partly by the month and also by working farms on shares. In those days when working a farm on shares, you boarded with the family, including washing, and had one third of the profit. In the next five years he laid up $500—was then married, bought a small farm for $750, paid $250 down, with five years to pay the balance. He worked it eight years, then sold, and was worth at that time $2,100. Worked a farm on shares for two years—was then worth $3,100. Then bought a farm for $4,500, having it so arranged that the payments would be made from the grain and meat raised on the farm. When that was paid for, sold again and bought another for $8,200. By improving in fencing and building, the farm is now worth $13,000. Many young men, who commenced with nothing, have now good homes, surrounded with all the comforts of life. Working a farm on shares, he thinks is quite as profitable for a young man as working by the month. A Farmer's Son. *Lockport, N. Y.*

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[For the Country Gentleman and Cultivator.]

THE BLUE GRAPE BEETLE.

Messrs. Editors—In your issue of the 29th ult., Mr. Schuyler Worden makes some inquiries in relation to a small "green" bug that destroys his grape buds. This bug is an old acquaintance of mine, having several times almost destroyed my crop of grapes; this season they have not done as much damage as for several years past, and my vineyard now promises an abundant yield.

The insect is what is called the Blue Grape Beetle, and if Mr. Worden will examine the Rural New-Yorker of the 18th May, 1861, he will there find a full description of it. The only *effectual* remedy that I know of is the pinching process. I have tried soft soap and whale oil soap, but could see no good in either. As soon as the vines dried after washing, the bugs would go on with their work.

I think Mr. Worden is mistaken as to the place of deposit of the eggs of this insect. I have this spring in several instances found inside the bud, perforated by the bug in each case, two small sprightly worms of a whitish color, which I believe is the larvæ of this beetle, and that the object of the bug in perforating the bud, is to have a place of deposit, for its eggs, when hatched feed upon the succulent parts of the bud until they have eaten their way out; the worm then passes into the ground, where it remains till the warm weather of the next spring changes it into the beetle, ready to go through the process of the year before. I know this is not the theory of writers upon this bettle, yet I believe a careful examination of its habits will show it to be true, and that the slug upon the grape leaf belongs to a different family of insects.

A writer in the Gardener's Monthly for January last, says that the slug not only feeds upon the tender part of the leaf, but also destroys the unopened blossom. In this I believe he is in error, and that if anything feeds upon the unopened blossoms, it is something else than the larvæ of the grape beetle. I have never found anything disturbing my vines in this way, (and I keep close watch of them,) unless it is the cut worm, which I have known to crawl up the vine and cut off the nearest cluster.

I hope some one well versed in *bugology* will carefully study the habits of this beetle, and give us the benefit of his researches. J. Larrowe.

Hammondsport, June 2d, 1862.

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HOW TO TAN SKINS.

Two correspondents of the N. E. Farmer give the following directions:

1. Take two parts of saltpetre and one of alum; pulverize finely, mix them and sprinkle evenly over the flesh side of the skin; then roll the skin tightly together, and let it remain a few days, according to the weather, then scrape the skin till it is soft and pliable. I have tanned skins in this way so that they would be as soft and white as buckskins.

2. "A reader" wishes to know the mode of tanning coon and fox skins with the fur on. I will give him my mode of operation. If the skin is green from the body, scrape all the flesh from it, then pulverize equal parts of saltpetre and alum and cover the flesh part of the skin with it; put the flesh in such a manner as to hold the brine when dissolved, then lay it away in a cool place—say the cellar—and let it lay four or six days; then cover the flesh part with soft soap and wash off clean with water. Dry in the shade, roll and pull occassionally while drying; then roll and pull until soft and pliable.

[For the Country Gentleman and Cultivator.]

THE PRODUCTION OF BEES.

The Author of Nature has so established his immutable laws of reproduction by the semen of the male and female blended together, as to form the embryo which contains all of the elements of a perfect animal of its kind, (and in no other way,) possessing life, physiology, and all instinctive propensities. The Creator made the semen of the drone bees to retain its vitality for a long time after being given off by the drone for productive purposes. It is semen, commonly called jelly, that fecundates the worker larvæ and the embryo ovary of the immature queens, and occasionally the embryo ovary of the fertile workers, thus forming the elements of a perfect drone only. The next thing to be done by the laws of Nature, is to change the drones' eggs that would have produced *drones* so that they will produce perfect workers. Now it is well known that semen is conveyed by the drones to the spermatheca of the queen in sufficient quantity to fecundate for life a great proportion of her eggs on the way out, and such eggs produce the workers only. The reader will bear in mind that it is admitted that semen, when blended with the eggs, contains all the elements of a perfect worker, which is distinct from the drones, differing in physiology and instinctive propensities, made so by the immutable laws of reproduction by semen given to the eggs by their queen.

The next thing to be considered is in what way the perfect queen is produced, which is a distinct bee in her physiology and instinctive propensities from the drone or worker. To produce a queen the workers take semen that is given off by the drones and convey it to the royal cells for the purpose of fecundating the workers' larvæ, and the larvæ so infused with semen possesses all the elements of a perfect queen. Without blending of semen with the worker larvæ no change can be made in the physiology, organism or instinctive propensities of the queen or worker. All this takes place in the transition from the egg or drone, or the worker larvæ, to the queen. The life of the queen is extended to five times the length of the worker or drone, and possesses much greater tenacity. Can we suppose that this can be effected by a *vegetable compound*, as German theories would have it? It is ascertained in physiology that semen is a secretion in the glands of the male and female of the animal and vegetable knigdom, and must be blended together before organized life can be produced in animals or insects.

Prof. Van Siebolt, Prof. Luckart, and others, have labored much to bring proof that the bee, with many other kinds of insects, are produced by parthenogenisis. I think it impossible; they may exist in insects of the lowest order as the male and female exist for a time in the hermaphrodite state, like many plants that are hermaphrodite, producing the male and female pollen. For illustration take the pistilate strawberry plant, when by itself at first it will produce a few berries, being the effect of the staminate pollen received by their progenitors, which when used up they will become barren for the want of staminate pollen.

Prof. Van Siebolt classifies together the bee, butterfly, miller, and other insects which may be brought into existence imperfectly by parthenogenisis. I would take the butterfly, which has two distinct existences and organisms—first the worm, second the perfect insect. The Author of Nature has so arranged their reproduction that the fertilized eggs bring forth the worm, which, by food, is enabled to secrete semen and other substances necessary to form a perfect insect. It then returns to an egg form, and is fertilized with the accumulation of semen and other substances. It then comes forth a perfect insect, and after copulation the female is fully prepared for laying fertile eggs by the additional secretion of semen in the worm state, which causes the perfect insect and may give productive strength to the next generation by semen secreted in the worm state; but it would be imperfect, producing females only, and finally become barren like the strawberry plants

The male's semen or pollen is the sole cause of perfect reproduction; but the Author of Nature has made a law for the bee, that by semen to fecundate the ovary, egg, and larvæ, to cause three perfect and distinct kinds of bees, differing in their organism, number and propensities, having scarcely any analogy to the insects before mentioned, which consist of male and female only, of nearly equal sexes, generated in the egg and worm state. The three kinds of bees require three distinct secretions, in part, in the worm state, to give the particular elements of each—first, to form the drone; second, to form the worker, and third, to form the queen; and each may be hybridized by the semen of the opposite drones. Yet man has the prerogative given to him by the Author of Nature, to improve the animal and vegetable kingdom, and make them more useful to him. He can improve the hybrids even, by reason that some of them having some stronger traits of character resembling the father or mother, they can by them be improved. It is so with the bee, and taking advantage of that trait, by careful breeding he can bring out an Italian race that is better marked than those found in a state of nature.

Now is the time to test the question of reproduction of the drone and queen, by hybridizing with the Italian bee, which principle lies at the foundation of the science of bee-culture, which is not intelligently answered by the German theories to the satisfaction of most bee-keepers. I received letters the past winter from S. B. PARSONS, M. QUIMBY, Prof. KIRTLAND and others, they being engaged in disseminating the Italian queens, and as they supposed their purity was not affected by rearing Italian queens with black workers and drones; but they have mostly ascertained that queens so reared in their metamorphose from the egg or larvæ to a perfect queen, would become hybridized in some way that they did not fully understand. Accordingly they have come to the conclusion that pure Italian queens could not be reared without employing pure Italian queens, drones, and workers. These and other kindred questions, it is hoped, will show the cause of the queen being hybrid by transition when reared by opposite kinds, and will make the subjects of investigation, that the rudiments of the science of bee-culture may be made plain, and what is now considered mysterious, by investigation of the laws of nature in reference to the reproduction of the honey bee, may be as clearly understood as the reproduction of other insects or animals.

Henrietta, May, 1862. ELIHU KIRBY.

[For the Country Gentleman and Cultivator.]

Poor Man's Hard Soap.

Put in an iron kettle 5 lbs. unslacked lime, 5 lbs. salsoda, 3 gallons soft water; let it soak one night; in the morning pour off the water; then add to the water 3½ lbs. of grease; boil till thick; turn in a pan to cool; when cool cut in bars.

Orange Co. E. C. A.

[For the Country Gentleman and Cultivator.]

FOR CHAPPED HANDS.

Wash the hands, and, without using the towel, apply a small quantity of honey and rub it in well. Use once a day, and it will make the hands very soft, and cure as well as prevent chapped hands.

Apply it in the same manner to a cow's teats. A. B.

RHUBARB SYRUP.

The aperient qualities of green rhubarb, and its conduciveness to health being now so well known, its usefulness does not admit of a doubt; but allow me to remark it is best used in the form of a syrup, eaten with plain bread, as are all cooked fruits; and not with pastry, especially by invalid persons who have billious constitutions. Pastry is like strong drink—it only serves to indulge the appetite, rather than to impart to it any real good, causing secretions in the stomach beyond their natural order. To make rhubarb syrup is simply to cut in small pieces, simmer it over a slow fire one hour with a very little water; or it may be baked in a jar, then strain it and add sugar to suit the palate. When it is young it is like apples, unnecessary to be peeled. If sweetened with the best of sugar (loaf is the best,) it will, if preserved air-tight, and set in a cool place, keep good for many months, and will be found to be pleasant and refreshing at all times and seasons.—*Gardener's Chronicle.*

WISCONSIN AGRICULTURAL AND MECHANICAL SOCIETY.—This Association will hold its next annual fair at Milwaukee, commencing on the second Monday in September. In character it is intended to resemble usual State Fairs, and will include a horse show and trial of speed. Premium lists are now ready, and may be obtained by addressing Mark Miller, Secretary, at Milwaukee, Wis.

[For the Country Gentleman and Cultivator.]

CUTTING STALKS---DOES IT PAY?

This question has been long in debate; how shall it be decided? So far as I recollect, "Old Hurricane" started the breeze, or at least excited it to new violence about one year ago, since which time it has been in agitation with little or no abatement. Sometimes this, and sometimes that end of the beam has been up, as mite after mite has been cast into the opposing scales. But so far the balance seems about as at the beginning. Some prefer cutting stalks before feeding, because, with the use of meal or bran, their cattle make clean work of them; and some, because the parts left are not in the way in the manure. Now, I must say frankly, that the latter is with me the cause which weighs, for it must be confessed that it is anything but agreeable to have a fork full of manure held down by sundry cords from three to five feet in length, which when they give way, come with a flop into the face or around the ears. And such things, stalks in the midst of manure are wont to do. Besides, a considerable "sprinkling" of these on the land are not as convenient to plow or drag amongst as the uninitiated might be disposed to allow. As to cattle making cleaner work of cut than uncut stalks, my observation and experience do not affirm. When a lad I used to be sent to feed the stock from uncut stalks, and I always noticed that some of them would remain uneaten, whether fed in yard or stall. After beginning practice for myself with one cow, I used to read articles extolling cut over uncut feed, and especially in regard to cornstalks, as cattle would thereby be induced to eat them up clean. I therefore procured a machine, and put my bright, well-cured stalks through it, not harboring a doubt that I should see my manger regularly cleaned of all incumbrances. But to my surprise it was not so. Then I tried sprinkling with brine, but this would not induce the brute to clean her trough; nor did the subsequent use of bran or meal accomplish the object any more effectually. I gave up that my cow was dainty, and shoveled the rejected butts into the stall to mix with the manure.

I have since owned several different cows, but my experience on the stalk question has not varied from that in the foregoing case, and I have come to the conclusion that the kind of cattle which it is my luck to own, are not the kind which relish stalk-butts. So far as I can judge, without weighing, about as large a proportion are left uneaten, whether fed cut or uncut. The experience of other people may differ from mine, and yet from a somewhat exended observation, I am inclined to think that in a large majority of cases, other people's experience is about like mine.

But there are exceptions to almost all rules. For instance, some men's stock will eat about anything and everything fed to them. Whether it is in the way of curing their food, or of feeding it to them, or from some other cause, I will not take it upon me to say, but this I noticed in the management of a stock in which I had an interest a few years ago, the cattle ate clean whatever was given them. Among their winter supply of food was a quantity of stalks, which were fed to them whole, and which they so completely devoured that I was never able to detect any considerable amount of refuse in their mangers, or about their stalls, or in their manure, and I really doubt whether any one could have gathered up a wheelbarrow load of uneaten stalks from the product of two or more acres which was fed to that stock. And yet it wintered well, though it always seemed to have an appetite for all that was given it.

In trying to account to myself for the clean work made of the stalks in this case, I had to confess that the man having charge of the cattle, had the peculiar "faculty" of having them eat what most of us have tried in vain to have ours eat. He manifestly never cloyed them with that particular kind of food, and somehow they seemed to understand that when they had eaten up their stalks they would get something else—and not before.

From all that I have read and observed therefore, I conclude that well cured stalks are good and valuable food for stock; but that in a large proportion of cases, a certain quantity will be utterly rejected as food, or if eaten at all, eaten quite reluctantly, and that this is true whether fed whole or cut and mashed with a good machine. Consequently he who buys a machine, thinking that he will thereby secure clean work with his stalks, will probably live to find out his mistake. However, if he wishes to feed meal or bran with them, it is certainly an advantage to have them cut, and besides, if there are any left, they mix much more readily with the droppings of the stable. This, so far as I can yet see, is the conclusion of the whole matter. If I should get further light from observation or experience, I may be anxious to communicate according to the light received. S. *Clinton*, *Feb.* 14.

THE WISTARIA.

There are, in almost every garden, certain situations in which climbers may and should be planted; as for instance by brick or stone walls, board fences, old trees, outhouses, &c. An excellent climber for some situations, is Wistaria sinensis or Chinese Wistaria. It has many qualities to recommend it. Perfect hardiness, handsome foliage, elegant flowers of delicious perfume, constitute some of its claims on popular regard. Where it has a trellis or wires to run upon, it requires no care whatever, as it twines itself so closely about these supports as to be absolutely a fixture, it being an impossibility to remove it. Where it is trained to a wall without any rods or wires, it will require to be tacked to it every few feet of growth. It will be found to save much trouble, if stout wires are stretched at about 12 inches distance from the wall round which the plant may entwine its shoots.

It is one of the most rapid growers of all the climbers, frequently making twenty feet of growth in a season. Although such a vigorous grower, it can be easily kept within any desirable bounds, and by frequent pinchings and prunings can be restrained so as to curb its natural rampant growth, and induce a more profuse display of flowers.

One objection to the Wistaria is that it bears its long, pendulous clusters of pale blue flowers, before its leaves have expanded. One other objection is that the plant needs to be quite old before it begins to bloom.

We can conceive of no better climbers for a lofty blank wall than the Wistaria, our Native Grapes, or the American Ivy. And these are all of such easy propagation and cultivation, are so hardy and suited to our climate, and are so beautiful in foliage, that it really seems there can be no excuse for a person who hesitates to plant them in localities which seem especially to need just such plants.

G. B. H.

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☞ The statement of shipments of Grain and Flour for tide water, from Buffalo and Oswego, shows that the amounts afloat upon the Canal were as follows, at each of the dates mentioned, three weeks being included :—

	Flour, barrels.	Wheat, bushels.	Corn, bushels.	Oats, bushels.	Barley, bushels.
May 14,.......	18,691	3.257,525	975,746	24,258	38.684
May 21,.......	41,785	2,827,041	1,174,813	24,258	87,220
May 28,.......	48,751	1,812,285	1,356,136	11,860	34,554

These are the figures given by the Buffalo Express. They seem to show that the amount of wheat coming forward is on the decrease, while that of Flour is gaining, and that of Indian corn also increases considerably.

☞ A vessel which sailed from Boston, May 17, for Australia, took out two trotting stallions, grandsons of old Black Hawk, and nine Merino sheep from Vermont flocks.

[For the Country Gentleman and Cultivator.]

THE ATWOOD MERINOS.

Eds. Co. Gent.—L. C. Mead of Cornwall, Vt., in your issue of May 1st., has some remarks on my notice of the sheep of the Messrs. Couch, as per the Co. Gent. of April 3d. I have delayed replying to Mr. Mead till this time, as I wished with this, to forward the weight of some of the fleeces of this year's clip.

Perhaps I was not quite as particular in my account of the Messrs. C.'s flock as I should have been—as I said nothing of their having purchased ewes as well as bucks of the Atwood Merinos.

Their first purchases were in 1857. From that year till last autumn, they have purchased five bucks and about forty ewes, paying from ten to seventy-five dollars per head for the ewes, averaging about $25 each.

Of the 106 lambs raised in 1861, I stated "a large portion of them were of the pure 'Atwood breed.'" After the publication of my letter Mr. C. informed me that this was a mistake, as there were only about 20 of the lambs "pure bred." This year they have a larger number.

The Messrs. C.'s have been careful breeders, and had very much improved their flocks years previous to purchasing from "Addison county flocks;" and it is the breeding ewes of their original stock that they value at $10 per head.

They have purchased sheep in Vermont, from W. R. Sanford of Orwell, Jesse Hinds of Brandon, Lawrence of Monktown, and of one or two others whose names are not recollected. With these flockmasters and their flocks, probably Mr. Mead is well acquainted. Some of our farmers think the Messrs. C.'s have foolishly expended their money in purchasing these high priced sheep. But the Messrs. C.'s are satisfied with the investment of their money, and they are shrewd common sense people who manage their business systematically, and know at the end of the year the exact "profit and loss" of their labors.

They have sheared a portion of their sheep—without washing—four of the fleeces weighed 66 pounds—the heaviest fleece 18¼ pounds. Last autumn they purchased a buck lamb, then six months old, for which they paid $100, which when 13 months old sheared 15 pounds.

Within the past few years there has been much discussion at the agricultural meetings, and in the various agricultural journals, in reference to the most profitable breeds of sheep for our farmers to rear. The different varieties are classed as mutton sheep and fine-wooled breeds. Which are the most profitable breeds for different farmers to rear depends upon various circumstances, such as the nearness or remoteness to good cash markets, quality of pastures, winter-keeping, &c. At one of the Legislative Ag. Meetings in Boston last winter, the subject of discussion was on "Sheep Husbandry." Mr. C. L. Flint, chairman of the meeting, said: "The breeds which would be likely to give the most profit in the eastern section of the State, were believed to be those which fatten readily and make good mutton—such as the South-Down, Oxfordshire-Down, Cotswold, &c." And very probably Mr. Flint is right in his views in regard to the eastern part of Massachusetts. There is always a ready cash market for prime mutton and lamb.

Dr. Loring in the discussion, gave it as his opinion that the Merinos are the only breed that can be systematically and profitably kept in the State. The advantages of this breed over the English breeds, in his opinion, are "that they can be kept in larger flocks, and will endure hardship better; that they will yield a greater quantity of wool worth more per pound." The Dr. farther remarked, "He did not regard mutton as an article that can be profitably produced here. He thought it could not be sold in large quantities. Hind-quarters were regarded as a luxury; but what becomes of the fore-quarters? Does anybody fatten sheep except at a loss?"

To the last quotation I have made from the Dr.'s remarks, John Johnston replies in a letter published in the Boston Cultivator of March 22d. He says:

"In reading your report of the late discussion on sheep I was a little surprised to see the remarks attributed to Dr. Loring." Mr. Johnston writes—"What does the gentleman suppose becomes of the 450,000 to 500,000 sheep that are annually sold in the city of New York, some 250,000 in Philadelphia, and probably an equal or greater number in Brighton or Cambridge? I have fattened sheep for the eastern market for nearly forty years. I have fattened various breeds, and by looking at the reports of the New York live stock market for the past year, it will be seen that the Merino sheep, well fattened, brought from half a cent to a cent a pound more, gross, than coarse wooled sheep, excepting some very large Leicesters and Cotswolds, for which the butchers pay a high price to make a show. Merinos can be made large if well cared for from their birth. The coarse wooled breeds come sooner to maturity."

By the way in which some persons talk and write about the fine wooled breeds, we should be led to suppose their whole value consisted in their fleeces—that their carcasses were of little or no value for mutton when contrasted with that of the coarse wooled varieties. Now it is possible there may be some prejudice in this matter.

Thus, L. F. Allen in an agricultural meeting, stated "that he could distinguish different breeds by the taste of the mutton, in thin slices—and said fine wooled animals secreted much grease and thus prevented proper perspiration, and that he could 'taste the wool' in the meat." By way of *set off* to the above, "J. Harris of the Genesee Farmer, subsequently at the same meeting, stated that he had always been an advocate of the same views; but being subsequently at John Johnston's, the latter had a very fine saddle of mutton on his table, and called him to test his theory. "What kind of sheep is this mutton from?" asked the host. "Why," replied he, "it appears to possess all the excellence of the South-Down, but its size indicates the Leicester; it must be the South-Down." Other gentlemen present concurred in its excellence. "It is the Saxon Merino," remarked Mr. Johnston to the surprise of all, and to the utter demolition of the beautiful theory that Mr. Harris' pre-judging had built up.

At the present time pure bred sheep of all the better varieties command, as store sheep, high prices, and those farmers, who purchase these high priced breeds, will be likely to take a deeper interest in, and much better care of them, than they would of the more common and mixed varieties among us.

Care and system in the management of sheep is absolutely necessary for the successful prosecution of the business. The success of our best flock-masters fully attests the correctness of the above statements, in the management of their fine wooled breeds, and we have no doubt but those engaged in mutton breeds will prove equally successful with similar care and system. And it would be the extreme of folly for any one to pronounce this or that particular breed of sheep as the *one breed* above all others, the most profitable in all locations and for all farmers. L. Bartlett. *June 9th*, 1862.

P. S. The Messrs. Couch's usually fatten a portion of their wethers each winter,—three and four years old, obtaining for them as mutton, from $3.50 to $5 per head.
L. B.

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Relative Value of Food for Milch Cows.—Several French and German chemists estimate the relative value of several descriptions of food for milch cows as follows:—That 100 pounds of good hay are worth 200 pounds of potatoes; 460 pounds of beet root, with the leaves; 350 pounds of Siberian cabbage; 250 pounds of beet root, without the leaves; 250 pounds of carrots; 80 pounds of hay, clover, Spanish trefoil, or vetches; 50 pounds of oilcake or colza; 250 pounds of pea straw and vetches; 300 pounds of barley and oat straw; 400 pounds of rye or wheat straw; 25 pounds of peas, beans, or vetch seed; 50 pounds of oats; or 500 pounds of green trefoil, Spanish trefoil, or vetches.—*Scottish Farmer.*

What is that which makes all women equally pretty? Putting the candles out.

[For the Country Gentlemen and Cultivator.]

SEA WEED AS A FERTILIZER.

Messrs. Editors—I have been an attentive reader of The Cultivator for some years past, and think it a valuable publication for the farmer. I fear its merits are not as highly appreciated as they should be, by those whom it is most calculated to benefit. Indeed there are none so wise, of whatever profession, but might learn something useful from its perusal, provided a practical application was made of its hints and suggestions.

The great advantage of The Cultivator is the opportunity it gives to farmers situated in different parts of the country, to express their ideas, thus furnishing a medium for free interchange of thought on all subjects relating to farm management.

It is with no small degree of diffidence I avail myself of this privilege which you so freely accord to others, since this is the first time I ever attempted to write for any publication. Nevertheless, I overcome my scruples when I consider the *importance* of the subject about which I am to write, and also that it has never, to my knowledge, been even mentioned in your columns.

The great object for which I write is to draw to the subject the attention of others of more experience than myself, and to induce them to give to the world the benefit of that experience.

The subject is the proper management of Sea Weeds, or the Drift of the sea shore, as a source of manure. I am well aware, to the greater portion of your readers, those residing at a distance from the water, the subject is or no *practical* importance. Nevertheless, The Cultivator must find its way to homes "close by the sea shore"—in New-Jersey, Long Island, Connecticut, Rhode Island and Massachusetts. The immense quantities of drift cast upon the shores of these states, amounting annually to thousands upon thousands of loads, must be of *great value* to those living near the water, and so situated that they can apply it to the soil.

The "drift" is a constant and inexhaustible source of manure, and never fails. It being a natural growth, the quantity does not materially vary from one year to another. There are three distinct varieties—it is not my intention, however, to give any description of them at the present time—suffice it to say when nearly arrived at maturity, their hold upon the place that nurtured them is broken, and they are cast upon the shore. "Drift" is the term usually applied to them in this state. If not gathered, it "moveth about withersoever the wind and waters taketh it."

That it should be collected and applied to the land, no one will doubt. The important question is—what is the best manner of applying it? In the natural state or decomposed? If decomposed, what is the best method of rotting it? These questions, and many others relating to the varieties, (for all varieties will not admit of the same treatment,) it is important should be satisfactorily answered. None are better able to do so than those who have tried the various methods, and who judge from their own experience.

The easiest way of applying the drift, and as far as my observation has extended, the one most generally practiced, is to spread it on the surface, either to be "plowed in" or left on the surface as a top-dressing. There are two objections to this course which I think more than counterbalance all the good that may come from it.

1st. *The seeds of many foreign and dangerous weeds are introduced into the soil, which it is is nearly impossible to eradicate.* 2d. *It is unphilosophical.*

Those at all familiar with the sea shore have observed the many curious forms of vegetable growth at the margin or limits of the highest tides. Some localities, favorably situated, abound in a great variety of weeds of all sizes, colors, and descriptions. There are also a number of varieties of grasses, and these taken in connection with the weeds would furnish an interesting study for the botanist. I have often noticed a kind of grass resembling the "quack" of the upland, growing, however, much more luxuriantly. I have no doubt it is the veritable "quack"—its nature somewhat changed by the action of the salt water.

Now the sea weed being washed by the tide among these weeds and grasses, must become filled with their seed. Especially is this the case in the fall months, when the seeds having arrived at maturity shell and drop easily. When the sea weed is applied to the land these seeds must necessarily pass into the soil—some to grow, others to decay, because deprived of the influence of the salt water. To show that this reasoning is not visionary, one illustration will suffice. The facts of the case I can vouch for, as it came directly under my own observation.

A seven acre pasture lot situated close to the water,—"very handy to cart on to,"—was covered over with drift three years in succession. It was then plowed and planted with corn. Much to the surprise of the owner when the time for hoeing came, the "quack" was so thick the lot looked like a field of wheat flourishing finely in the month of October or November. There was never known to be any quack in the field before, excepting in one small corner where the tide occasionally overflowed—a convincing proof that the quack was brought in with the sea weed. This manner of applying the drift I therefore consider hazardous, and never to be risked except under peculiar circumstances, which I may mention at some future time.

2d. It is unphilosophical. The nature of the drift is such that it decomposes very slowly, and being placed on the surface, subject to the action of the sun and wind, it loses one of its chief virtues—its saline properties. To be sure, a small portion of the salt it contains may be "washed into" the soil by the rain, but the greater portion is evaporated and passes into the atmosphere. If it is "plowed in," this difficulty is obviated; but the quantity that can be treated in this way is at the best but small, compared with the whole amount accumulating throughout the year.

Therefore it is my opinion that drift should never be applied to the soil in its natural state, or at least in the condition it is taken from the shore. To be used advantageously it *must be decomposed.* To hasten decomposition, and at the same time to increase its value as a manure, it should be *composted* with other materials—the substances that are adapted to this purpose, i. e., those that are the most available—those that will "pay the best." The best method of treating the different varieties of sea weeds, are inquiries which I shall consider at some future time. A Young Farmer. *Greenwich, Conn.*

[For the Country Gentleman and Cultivator.]

On Rupture of the Gullet and Vomiting in Cattle.

On or about the first of March of this year, I was called in to give my opinion about a small Ayrshire cow, the property of and just newly purchased by a Mr. Henderson, dairy proprietor in this city. He had bought her on the day previous in market, without warranty, from a cattle-dealer, who said he knew nothing about her. Nothing wrong was observed about her until towards the evening, when she was observed to swell up on the left side, and vomit on attempting to swallow food; which latter I may mention here, was sloppy, and naturally easily swallowed. Next morning she repeated the same process, vomiting again, and not without evincing considerable pain.

Diagnosis—Rupture and Impaction of the Gullet.—On passing the probang, I found the obstruction to be in the thoracic portion of the gullet. With some care the instrument forced its passage through, and for a time food passed through the opening and afforded the animal temporary relief. I ordered her to get nothing but diluents, with a view if possible of breaking up and washing down the mass into the stomach. The probang was passed for several days, each time affording relief; but the opening speedily filled up again, followed as a matter of course by the vomiting and distention of the rumen. In this state of affairs, I recommended an operation for its removal through the walls of the stomach; but the owner, evidently doubting the nature of the case, would not consent.

This being the case, I had no resource left but to watch how the affection proceeded, still recommending diluents to be allowed only. The animal began to waste, but still gave milk, which latter one hardly expected. This, however, she did until the seventh week, by which time she was reduced to a living skeleton, ultimately dying of exhaustion.

Post mortem.—Bowels and stomach completely empty, with the exception of some indigested matter on the first stomach. Gall bladder distended; liver, kidneys and other viscera healthy. On cutting into the thorax the lungs were observed healthy; heart usual size and healthy, but immediately between the upper lobes of the lungs I found, as I anticipated, that the muscular coat of the gullet was ruptured to the extent of nine inches in the direction of its tube. The consequence of this was a loss of power on the part of the gullet to contract on and force down the food into the stomach, its accumulation at the ruptured spot extending the mucous or internal wall of the gullet into a large oval sac.

REMARKS.—Vomiting but rarely happens in cattle, occuring only in such cases as this, or in constriction of the gullet. The diagnosis between the two is, however, not very difficult. I have seen but one case similar before; it also occurred in this city while I was a student at the *Edinboro Veterinary College.* In that case we operated by cutting into the stomach and passing the hand from thence into the gullet; the obstruction was completely removed, and so far the operation was successful, although too long delayed to save the already exhausted animal.

The gullets of both cows are now in the museum of the Edinboro Veterinary College. RUTHERFORD, V. S.

Veterinary Infirmary, Edinboro, Scotland, May 13, 1862.

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[For the Country Gentleman and Cultivator.]

MANUFACTURE OF SORGHUM SUGAR.

MESSRS. EDITORS—As I have recently noticed several inquiries in the COUNTRY GENTLEMAN in reference to the raising and manufacturing of the sugar cane, I thought I would offer my mite to the general fund of information, which you can accept or not as you see fit.

Iowa has so far taken the lead in this new branch of agriculture; being the first to engage in it, and having produced the greatest number of gallons of syrup and pounds of sugar. Last year we produced a greater number of gallons of syrup than were consumed in the State, of both home-made and southern molasses, besides a large amount of sugar, which is more than can be said of any other Northern State. This year, if the season is favorable, we expect to export a large quantity. So I think we are as well qualified to speak from experience here as in any other section of the country.

First, the kind of cane. The sorghum or Chinese cane is almost universally preferred; it making a greater amount, and a better quality than any other kind. However, there are a very few who prefer the Imphee.

The kind of soil best adapted to raising cane, is a light, sandy loam. It should be high and dry, and be manured the previous year, as cane grown on freshly manured ground tastes too much of the ammonia.

There are various opinions as to the best method of planting; some preferring to plant the seed dry, others to soak it long enough to thoroughly moisten the seed, and still others to soak it in warm water twenty four hours, and then hang it up in a bag in a warm place till it sprouts from a quarter to half an inch long, and then plant in newly plowed ground. The latter plan I think is the best, for it is so very slow to start that the weeds are apt to get the advantage of it before it is large enough to cultivate, and this gives it fully a week's start of any other way. Cultivate same as corn, and when ready to manufacture, the blades may be stripped off very expeditiously by using a light stick from three to four feet long, and striking from the top of the stalk down. In this way a good hand will strip from one-third to one-half an acre per day.

A number of different patent contrivances have been used in manufacturing, but none have been found to produce a better article than the simple wooden pan with sheet-iron bottom, placed on a furnace.

When the juice is ready for boiling, before warming add one gill of milk of lime, (made by placing stone-lime in a close vessel and keeping covered till slacked; when used, stir up to the consistency of good white-wash.) Boil rapidly, and keep well skimmed as long as the scum has a green color. As the whole secret of making a good article is in skimming, it should be carefully attended to; one hand standing over the pan constantly till done. It is boiled sufficiently for good molasses when it strings out like hairs when poured slowly in a small stream. For sugar, boil from five to eight minutes longer. When it is boiled sufficiently to begin to foam, like maple sugar when nearly done, the fire must be kept low to prevent scorching.

When going according to these directions, no difficulty has been experienced in making both sugar and molasses of a good quality. S. S. BOZARTH.

West Liberty, Iowa, June 2, 1862.

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[For the Country Gentleman and Cultivator.]

A WHILE IN THE ORCHARD.

The apple is a very good fruit if well ripened, and in order to have them hang on the trees until ripe, we must go through the orchard first and see what it wants. As we go through, we see many limbs chafing each other so as to chafe the bark off. We know when the bark is chafed, the sap does not flow freely, so one of the limbs that chafe must be taken off. We find some of the limbs run up nearly perpendicular, and if any apples set on them they will be shaken off, because when the wind blows, it gives a quick jerking motion to the limbs and prevents the fruit from hanging on. Some of the limbs run out horizontally, or at such an angle that after the fruit has set and grown larger and heavier, they cause the limbs to bend and sway in the wind so the fruit will hang on the trees until they are ripe. We do not want the limbs to run up towards the sky only high enough to make a good head, and then run out horizontally to make a good shape. I think the best shape for a tree is to have the lower limbs high enough for a team to pass under, with the head of the tree low, and with wide-spreading branches. If the limbs are too thick for climbing among them, they must be thinned out by going into the top of the tree and working our way down, which I think is a better way than to trim as many do—that is, they stand on the ground and trim what they can conveniently reach, which they call trimming up their orchards. If any one will look up into the trees of an orchard trimmed in this way, and one that is trimmed the way I propose, he will very soon see a great difference in favor of my plan.

Some will scrape off the rough bark of the body of the trees and wash them, which looks very well at the time, but some more rough bark will come on again. I think the best tree-scraper is the plow used in the soil, stirring it often, and preventing all weeds and grass from growing. If the plow is used thoroughly, the rough bark will fall off and leave a bright smooth healthy bark, which is *much* better and looks better than the scraped trees.

Most every one knows when he sees an orchard of good shaped trees, how well it looks, and it would be well for all to go to their orchards and imitate as near as they can. If you cannot make the form you desire the first year, lay your foundation, to be continued in after years. D. D.

COL. DUANE'S SEEDING MACHINE.

On the 10th June we attended a trial of Col. J. B. Duane's Seeding Machine, of which a very full description and several brief notices have heretofore appeared in our columns. We had never before personally witnessed its operation, however, in the field, although it was tested at the State Fair at Watertown, and has been doing considerable work during the past two seasons, we understand, for farmers about Schenectady.

The trial was held upon the farm of Mr. Collins, on the Mohawk flats near that city. The soil there is of a kind to show the working of such a machine to good advantage, but its condition was unfavorable, having been plowed when not sufficiently dry, and baked in quite hard clods under the sunshine.

Col. D.'s Seeder, as our readers may remember, combines in once passing over the surface of the ground every operation connected with the complete putting in of the seed. Teeth of a peculiar shape, devised to avoid clogging with anything over which they may pass, first cut up and cultivate the plowed ground, lying just as the plow left it; any desired grain then distributes itself over the surface just behind the cultivator teeth, and is covered by a drag following them; clover seed, or clover and timothy are next sown, and covered by a fine saw-tooth drag; the roller follows, and, last of all, plaster is distributed over the surface behind the roller, at any desired rate per acre. [See vol. xviii Co. Gent., page 253, for cut and fuller description.] Thus the ground is passed over but once, in breadths of four feet, although it is designed to construct machines of six feet width; the whole work is completed as fast as it is begun—neither rain nor any other cause having an opportunity to intervene and leave the operation half done—the grain half dragged in, or the clover unsown, or the land unrolled, and consequently unfit for the reaper and the mower at subsequent harvests.

The points which the actual trial of the machine, as compared with seeing it not in operation, brought most particularly to our notice, are these:

1. The success with which the inventor has harmonized and combined in small compass so many different actions, and the simplicity with which each by itself is accomplished. The weight of the whole apparatus is adjusted so as to balance itself upon the roller—just where it is wanted. The roller itself can be consequently constructed of as light material as is compatible with strength. Castor wheels in front, and the two sections in which the roller is made, enable the machine to turn with perfect ease in its own width, so as to begin the next breadth just at the edge of the last one. The driver, seated behind, regulates everything, from the depth of the cultivator teeth in front, to the throwing of the whole out of gear, without leaving his place.

2. The great ingenuity displayed in the several parts. The cultivator teeth in passing through the barn-yard to reach the field, cleared themselves of the loose straw as they went along. By changing them for those of another pattern, the land is thrown in narrow ridges and the seed therefore comes up in perfect drills. By reference to page 253 of our last volume, already alluded to, other ingenious devices will be observed, all of which performed very satisfactorily, the parts they were intended to fill.

3. The ease with which so much labor is done at once. The team employed was an excellent one for farm work of any kind, never lagging or hanging back in their work; but they were not heavy, and although it was a good pull for them, and the day oppressively warm, the task seemed quite as easy and much less noisy than the working of a Reaper. We tested the draught by an ordinary spring dynamometer, which varied in the oscillations of the index, with the movements of the team and casual obstructions, from two or three hundred pounds all the way up, but it lingered most and oftenest between 350 and 400 lbs., and the average could not have been far from 375 to 390.

4. The machine was tested first in sowing oats, and then with peas; the seed was perfectly covered in both cases, and the land left, as all who were present conceded, in fully as good, if not in better order, than if the several operations had been performed one by one in the usual method. The advantage here involved, is that by the use of such a machine, the farmer is sure of having his work well done throughout, whereas when each is done by itself, those which are not absolutely *necessary* to the growth of the seed at all, are frequently slighted, if not wholly omitted, in the hurry of the season, from stress of weather, or from that other cause which affects the performance of so many duties, away from the farm as well as on it—the spirit of idleness inseparable from "human depravity."

On the other hand, we have the objection that every farmer must sometimes wish to perform the separate operations combined in the Duane Seeder, one by one, and that in making this expensive addition to his farm machinery, he does not altogether obviate the necessity of procuring the detached implements for other tasks. A story was also told on the field, of some early citizen of Schenectady, more fond of large and forcible expressions than he was capable of understanding the accurate definition of the long words he so constantly employed, and who complained when Dr. Nott first brought out his improved cooking stove, that "there was a plaguey sight too much *metaphysics* about it." But, as already stated, each part of this machine—however "metaphysical" the whole may appear—is really simple in itself, and the danger of derangement arising from the number and complication of its parts, must be, in point of fact, less than we had feared. It is not a machine which a farmer would thoroughly comprehend until after some study and examination, unless possessed of more than the usual degree of mechanical aptitude, and, when thoroughly mastered, we fancy he would much rather work it himself than entrust it to most of the hired men he would be able to employ. But the same thing might be asserted with regard to the mower, and still more with regard to the reaper; and there is no doubt of the fact that our farmers are now much better acquainted with mechanical principles than they were twenty years ago. They have been educated up to the daily use of much machinery which would have appeared to their fathers quite as full of troublesome "metaphysics" as Dr. Nott's cooking stove did to those who had never before had anything but an open fire-place.

Upon the same field in which the Seeding Machine was tried, there had been one strip of oats put in a week or ten days previously, which showed, from the manner in which they were appearing above the surface, how well and evenly the seed was sown. In the next field we had similar evidence in regard to clover seed. We then drove out, about three miles, to the farm of Jacob Houck, Esq., at Glenville, to inspect a field of oats ridged in, in very perfect drills, by the same machine with different cultivator-teeth attached as above noted. The appearance of the young grain was very fine and even, with the exception of one strip where its imperfect growth had not been in any respect the fault of the machine.

If space permitted we should add some remarks with respect to the farming in this part of the Mohawk valley. We have never seen a farm more *perfectly neat* or apparently more thoroughly tilled, nor buildings more commodious and convenient for the purposes of such a farm, than we found at Mr. Houck's;—and this word of commendation although it may seem high, we shall hereafter hope to prove well deserved by a more complete description, if time permits our visiting Glenville again during the season. Among other farmers with whom we had some conversation, and whose systems of practice we shall some time hope to record, are Messrs. Collins, Charles Sanders and Albert Van Voast. J. D. Watkins, Esq. of Schenectady did much to forward the success of the trial.

THE CULTIVATOR.

ALBANY, N. Y., JULY, 1862.

☞ In the midst of a refreshing and much needed rain on the 4th June, we set out for Central New-York, congratulating ourselves that the drouth was at last at an end. At Syracuse we learnt that during the whole month of May there had been but about an inch and a half of rain, in round numbers, two-thirds of which fell during the first two days of the month, leaving the whole of the remainder very unusually dry. There could not have been so much rain last week, we judge, in Central New-York, as there was in the eastern part of the State, and we regretted to hear by friends from Buffalo and Rochester, that the showers there had been still lighter, scarcely wetting the surface of the ground.

The prospects for Fruit about Syracuse appear to be uniformly good. In the fine young orchards of V. W. Smith, Esq., the pear trees were as heavily burdened as they well could be, and as to plums he remarked that there would be plenty this season for human use even after the curculio has taken all it wants.

As to the Farm crops, a drive with Mr. Geddes showed that the winter wheat and grass have both been kept back for lack of moisture, while spring grain must also be somewhat behind. Mr. G. does not think the prospect for grain nearly so good as last year; it is well to add *how good* his own grain crops were in 1861, in order to understand the basis of this comparison: Upon 62 acres of winter wheat and 12 acres of spring wheat, harvested on the farm last autumn, *the average yield throughout* was twenty-eight bushels per acre. John Johnston had been at Mr. G.'s just before our visit, and thought the promise of the wheat now as good there as it is about Geneva. Mr. Geddes is constantly growing a smaller proportion of white wheat and a larger surface of Mediterranean. The latter has modified its character very much since it has been produced in his vicinity, and is now known as "Onondaga Amber." For domestic purposes it is preferred by Mr. G. to the white wheat, the bread made from it being moister, and quite as white as we ever desire to see it.

In an address last year we referred to Mr. G.'s farm as furnishing an example with respect to the amount of manure made upon it,—stating that he keeps a flock of sheep of just about as many head as he has acres on his farm, and is "careful to turn all the straw he grows into manure." The latter part of this assertion is quite incorrect. Straw sells readily there, and a large amount is yearly disposed of; but, in point of fact, it would be almost impossible to tread down and apply *all the straw* produced in the form of stable manure. What Mr. Geddes did do last year has given him a larger amount of manure than we ever before saw on one farm in this country,—from 13 to 16 piles, which have been put up during the spring in cleaning the yards, to await autumn application, mainly on the surface, and which have almost as neat and trim an appearance as so many stacks about an English farmstead. About forty acres of grain straw, about thirty acres of clover straw thrashed for the seed, and the waste of twenty-six acres of corn and forty acres of hay, entered into their composition during the winter, so that they probably represent quite as large a quantity as if the straw of the whole wheat crop of 1861 had been reserved by itself for the purpose. The present year there are 106 acres in wheat, 18 each in corn and barley, and 8 in oats—a total of 150 acres, leaving somewhat more than one-half the farm in grass and clovers, permanent or otherwise. Notwithstanding the native fertility of the soil here, and the amount of yard manure made, the main dependance, as we have heretofore stated after other visits, is upon clover and plaster, so that, in comparison with the benefit derived through the last mentioned agency, Mr. G. is almost inclined to regard yard manure as something of a drug, and is placed above the necessity of composting it with peat, &c., to increase its quantity, and of closely economizing all other manurial resources, as many less fortunately situated farmers are obliged to do. But his manure yards are tight, and their contents will not leach away; and for careful management, quite as much as for the amount that is made, a profitable lesson might be conveyed to any visitor at the farm in person, if not to any reader of these already too prolonged remarks.

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☞ During the past two months Hon. A. B. Conger of Haverstraw, has been making several important additions to his already extensive herds of Short Horns and Devons.

Mr. J. R. Page of Sennett, completed a number of purchases of Short-Horns for Mr. Conger in April last—among them the "Duke of Thorndale," bred by Sam. Thorne, and purchased of Daniel McMillan of Springfield, Ohio; the imported cow "Violante," bred by Jas. Douglass of Athelstaneford, Scotland, and imported by the Society of Shakers at Lebanon, Ohio, together with five others of less celebrity, also purchased from the Shakers; the imported cow "Bright Eyes 3d," with her daughter, purchased of J. D. Patterson of Chautauqua Co., also "Artless 3d," a two-year old heifer sired by Lord of Oxford, from the same herd; the cows "Vermillion" and "Queen Mary," purchased from Wm. D. Pierce of South Charleston, Ohio; "Grace" and her calf, from Jas. Hall of Paris, Ky.; "Coquette" and her calf, from Wm. R. Duncan of Winchester, Ky., and last, but not least, imported "Lydia Languish," by Duke of Gloster, "Pearlette," by Duke of Airdrie, "Jessica," by Albion, and "Winona," by Fantichini, all from R. A. Alexander, Woodburn Farm, Woodford Co., Ky.

Besides the foregoing, Mr. Page passed through here last week with a second installment, among which, we are informed, were the bull "Old Warrior," bred by Richard Booth, imported by the Clinton County, Ohio, Association—purchased from Wm. Palmer of that county; and several Short-Horn cows, including "Miss Belleville," imported by the late Noel J. Becar, purchased from E. Marks of Camillus, Onondaga Co. There were also four Devon cows from the herd of Ambrose Stevens of Genesee county.

We did not have the opportunity of seeing either of these transhipments, but from their pedigree, and the opinion expressed by Mr. Page, whose judgment in stock matters deservedly stands high, they cannot but prove a valuable accession to the breeding establishment at "Waldberg."

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Crops about Philadelphia.—A ride through portions of Chester, Montgomery, Delaware, and Philadelphia counties, shows a fine promise of the wheat crop—the only drawback being the large portions beaten down by the late great storm. The Mediterranean is exclusively sown. Fields generally appear as well as in the best portions of Western New-York, but the growth is six inches to a foot taller, and the heads rather shorter. Farmers think that the product will average 18 or 20 bushels per acre; and the best cultivators expect 25 to 28. Thirty bushels is about the highest product. Corn looks well for the late season, and the grass crop will be about medium in amount. I have seen meadows of some of the best farmers that will certainly bring three tons. J. J. T. 6 *mo.*, 11*th*.

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☞ The pecuniary value of the money and medal prizes offered for competition at the great International Cattle Show to be held at Battersea Park, London, June 23–27, is a little short of $25,000.

☞ What can Farmers' Clubs do beyond holding Winter Meetings for mutual intercourse and discussion, to promote the improvement and progress of Farming? This question is often asked. A great deal may be done through the summer months to keep up the interest and increase the efficiency of Farmers' Clubs. The Lincolnshire (England) *Chronicle*, an excellent paper which we receive with great regularity, affords an example in point, through the medium of an advertisement of the "Lincoln Farmers' Club," which offers the following "clipping prizes," as they are there termed, with an appointment of the farm on which the clipping is to take place, June 3d, when the following prizes will be given:

	£.	s.	d.	
To the man who shall shear 6 sheep in the best manner, time considered,	2	0	0	—say $10.00
To the Second,	1	0	0	5.00
To the Third,	0	10	0	2.50
To the Fourth.	0	5	0	1.25

The conditions are that competitors should be nominated by members of the Club, and reside within 12 miles of the Guildhall at Lincoln.

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The Live Stock and Agricultural Products of the Ssate of Indiana.—The census of 1860 gives the following returns as to the Agriculture of the State of Indiana:

LIVE STOCK—NUMBER OF HEAD.

Horses,	409,504	Milch Cows,	491,033
Asses and mules,	18,627	Working Oxen,	95,982
Sheep,	2,157,375	Other Cattle,	582,980
Swine,	2,498,528		

Value of Live Stock,	$50,116,964
Value of slaughtered animals,	9,592,322

AGRICULTURAL PRODUCTS.

Wheat,	15,219,012	bushels.	Wool,	2,466,264	pounds.
Corn,	69,641,590	do.	Irish Potatoes,	3,873,134	bushels.
Oats,	5,028,751	do.	Sweet Potatoes	284,300	do.
Tobacco,	4,657,969	pounds.	Butter.	17,934,764	pounds.
Flax Seed,	158,272	bushels.	Cheese,	569,577	do.
Flax,	17,112	pounds.	Hay.	635,324	tons.

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☞ We have received the Prospectus of a company entitled the New-York and Nicaragua Colonization Association." It appears from it that offers have been made of "large grants of land in more than one of the Central American States, on terms but little above the cost of record and survey, and on the sole other condition of immediate colonization and rapid settlement of the country." It is proposed to found a practical working colony, for which that part of Nicaragua near or about the head of Nicaragua Lake has been chosen as the most advantageous site. The climate and healthfulness of the country, the fertility of the soil, the character of the natives, are all most highly spoken of. The letters published in this Journal from our Minister to Nicaragua, Hon. A. B. Dickinson, (one of which may be found on another page of this paper,) afford farther information on these topics.

"For the purpose of organizing this emigration, establishing manufactories, opening up the mines and developing the agriculture of the region selected, this association has been formed, and a charter under the laws of the State of New-York has been taken out with a capital of $50,000, divided into 2,000 shares of $25 each. Each share will be entitled to a grant of 25 acres of land, which the shareholder may own in his own exclusive right; and, besides that, he will be entitled to his pro rata interest in the enterprise and profits of the corporation."

The President of the Association is Dr. E. S. Tyler, who is said to have been an extensive traveller in Central America. The Secretary, who may be addressed for farther information, is Mr. T. C. Leland, 614 Broadway, New-York.

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☞ The periodical formerly published at Montreal—the "Farmer's Journal," we believe it was called—surpassed anything else in our experience, in the unblushing appropriation of articles from the columns of other Agricultural Journals. But its successor, the "Lower Canada Agriculturist," bids fair to equal if not exceed it, in this direction. Several of the recent numbers have shown a marked degree of progress, and the one for June, contains page after page filched from the columns of the Country Gentleman and other American papers, without a single word of credit. Our exchanges on this side the lines, are many of them careless and unfair enough in respect to credits, but the palm must be awarded we think to the official organ of the Agricultural Board of Lower Canada.

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☞ The Journal of the Illinois State Ag. Society for June, contains a Report on Agricultural Statistics submitted to the Madison County Society of that State, by a Committee of which W. C. Flagg, Esq., was Chairman. As a home illustration of the subject, Mr. F. remarks that last autumn he arranged in a table the products of his orchard "for seven years. Now, in this case, the naked fact was that each year had furnished a given number of barrels of apples. A new fact, however, was that on alternate years the product was about one-half what it was in other years. Another new fact which appeared was that trees of early apples produced a smaller quantity of apples, but larger cash returns than winter fruit. These facts, thus arrived at in a satisfactory way, have an immediate practical value to myself or any other person under like circumstances."

The Report presents a detailed summary of the information given on the subject through the Country Gentleman, and submits a full and well considered plan for adoption by the Society, to procure returns of the Agricultural Statistics of the County of Madison. We need scarcely add that we are glad to see the good seed that was sown with a primary reference mainly to our own State, already springing up and bringing forth fruit away out in Southern Illinois.

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Thomas' Fruit Culturist.—A Michigan Subscriber writes us under date of May 21, 1862: "I have been almost a constant subscriber for your paper for some fifteen years, have acted as agent part of the time, and have been very much pleased and entertained with it. My copy of *Thomas' Fruit Culturist* has been very much used here, and is pronounced *the best work on fruit to be had*. It has done a great deal of good, giving such full and complete descriptions. My copy was published, however, in 1850, and I wish another of a later edition. C. F. M." Since the date mentioned by our correspondent, an edition has been published considerably enlarged, and with farther information as regards varieties of Fruit of more recent introduction. We can send him a copy, postpaid, for $1. The price at which it is generally catalogued is $1.25.

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Extraordinary Asparagus.—We received last week two bunches of Asparagus—25 stalks in each—weighing each about 3¾ pounds, accompanied by the following note:

Oyster Bay Cove, May 19. Gentlemen:—I send you to-day by express, two bunches of Asparagus, to show you what we can do in raising that vegetable on Long Island. What I send you is from a bed two and three years old. As I thought you would like to see some that we call fine, (though I have seen larger,) I took the liberty of sending it, hoping you will receive it in good order.

THOMAS YOUNGS.

We cannot say more than to add, with our thanks, that this specimen of Asparagus was very greatly admired by all who saw it, and *still more* by those who ate it. It reached us in perfect order.

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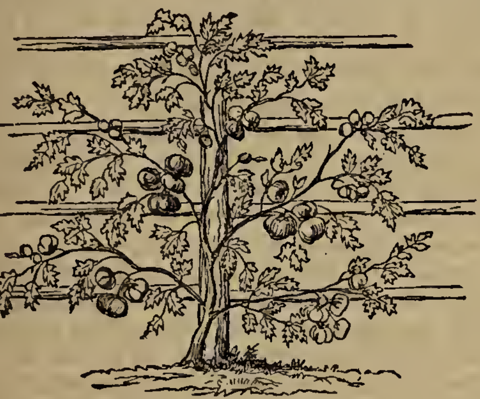
☞ It is said in the newspapers that "Belle of Brunswick," a 2:40, 1,000 pound, 15 hand, 5 year old grade Morgan mare, has just been shipped from Maine to Liverpool, for Mr. John De Costa, who pays $800.

Inquiries and Answers.

Tomatoes.—Can you give me a plan for raising the earliest tomatoes? M. A. J. [For ordinary out-door management, start the plants in a hot-bed, hot-house or warm apartment of a dwelling well lighted, as follows: Make boxes of rough half-inch boards five or six inches square, and three or four deep; leave the bottoms without nailing in, but wedged so as not to drop out. Fill these with rich earth, plant the tomato seed, and give warmth and light. This may be done several weeks before it would be safe to set them out. When there is no farther danger of frost, set them in open ground, by pushing out the bottom. The soil should not be extremely rich, or the stems will grow too luxuriantly at the expense of the fruit. When the stems have grown two feet or as soon as the fruit begins to set, pinch off the tops, to induce the formation of flowers and fruit. If a suitable house is provided for them, they may be planted as early as February, and then changed once or more to larger pots or boxes, as they increase in size. They should be supported by a small trellis, as shown in the accompanying figure.]



Trellis for Tomato Vines.

A Troublesome Weed.—This Scour grass is making great headway against me. Can you or any of your readers tell me how to exterminate it? It has taken possession of meadow and every place where the hoe does not come. I do not know the proper name of it, and inclose a small piece that you may call it by its right name. J. B. S. [We do not know the true name of the weed enclosed, but will endeavor to ascertain it. We believe it to frequent wet land particularly, and that the only remedy is to plow up, drain and re-seed the meadows; but perhaps our correspondents can give better advice.]

Impure Charcoal for Manure.—Is charcoal which has been used for rectifying liquors, valuable as a manure? If so, what is the best mode of applying it, and to what crops should it be applied? M. A. J. [The great value of charcoal consists in its power to absorb fertilizing material for plants; we do not think the matter which saturates it in this instance is of much value, but prevents it from receiving anything else better. It does not seem probable therefore that such charcoal can be of much utility.]

Rancid Butter.—Can you inform me, through the Co. Gent., if there is any way to improve rancid butter? I have looked through two volumes, but cannot find the information required. W. C. [We have seen it stated that rancid butter may be rendered sweet and good, by churning it in new milk. Try it and give us the result.]

A "Quarter" of Wheat.—Will you oblige me by mentioning exactly what the English "quarter" of wheat is, to which I see so frequent reference in the columns of the Co. Gent. A. P. [A quarter of wheat contains eight imperial bushels, and an imperial bushel contains 2,218.192 cubic inches, while our American measure is the old Winchester bushel, containing 2,150.42 cubic inches—so that the English measure is 67.77 cubic inches larger than ours. This difference in measure must be always calculated in comparing prices; 33 Winchester bushels, in point of fact, are very nearly equal to 32 imperial bushels.]

Layering Grapevines.—When and how must I layer grapevines, to get them to take root, that I may detach them from the parent root to transplant? I have a few Isabellas and Concords which I wish to multiply. A little information on the subject, will be gratefully received. J. M. Shafer. *Kalamazoo* Co., *Mich*. [Nothing is easier than to propagate grapes by layers. Early in summer, say during the middle or latter part of June, bend down the fresh shoots, and cover them in the middle with three or four inches of earth. To facilitate the operation, a cavity should be made in the surface of the soil for admitting them. If the ground is quite dry, bury them deeper. They will send out roots at every joint thus covered, and they may be taken up late in autumn or the following spring, cut off from the main vine, and each rooted layer cut into two parts at the middle, thus forming rooted vines. Set them out and let them grow another season, and they will make good strong vines. In setting out, do not allow much of the vine to remain above ground.]

Rancid Butter.—From much experience at sea I am enabled to give your inquirers about rancid butter (in the Co. Gent.) some practical hints. After repeated trials I have found the following the best method of restoring bad butter, if not too far gone: Place the butter in shallow wooden tubs, spread no thicker than two or three inches deep; with a knife or spoon, *channel* it thickly "criss-cross" down to the bottom of the layer. Over this pour strong brine, (I have used the brine from pork barrels,) covering the butter to the depth of an inch or more. One night's treatment is generally sufficient to "cure" pretty strong and obstinate butter. Should the "curing" be efficient, the butter may be salty. A washing will clean it, but the rancidity will return immediately if *all* the salt is washed out. Dr. E. F. Drayton. *New-York.*

Butter-Making.—At this season of the year many farmers who do not follow butter-making as a business, have more than they need for home consumption, and would like to put it away for winter use, among whom is the writer. Will some of your correspondents furnish the process (in the great butter district of Orange county,) from the milking of the cow to the closing up of the firkin? Will butter taste of the wood if put into freshly made oaken casks? J. R. W.
Havre de Grace. Md.

Cribbing.—I would inform "A Reader" of the Country Gentleman who "has a young and valuable horse which has taken to cribbing," that I was once similarly situated with him. I had a young and valuable horse which had this very unpleasant habit, and so far as I have been able to learn, it is considered a habit, not a disease, and I never yet saw or heard of a horse that had this habit that was cured of it, neither have I ever known a satisfactory cause assigned for the habit. I had a remedy which I applied to my horse to prevent his cribbing, which would prevent it as long as it was applied, but whenever it was removed the horse would resume the practice again. The remedy was to take a narrow strap and buckle it round the horse's neck or throat close to the head, the strap to be drawn tight enough to fit close to the neck, but not so tight as to interfere with his breathing or eating. I never saw my horse attempt to crib more than a few times after the strap was put on his neck, as long as it remained there; but whenever it was taken off he would commence again, thus showing that the inclination or desire for the habit was not affected by the application.
Wilmington, Vt., June, 1862. C. T. ALVORD.

Peppermint.—Can any of your readers give me the address of some person engaged in raising peppermint and manufacturing the oil—how to grow the plant, and how many pounds of oil per acre it will yield? Wide Awake.

Domestic Wines.—Will some of your correspondents please give a few good recipes for making cherry wine? The cherries are the common ungrafted fruit. Also how to make wine out of blackberries and raspberries? If they are mixed, will the wine keep as well as if they were not mixed?
Middlesex Co., N. J. D. C.

Lice on Calves.—Tell your correspondents, who may be concerned, to try an application of coal oil. B. A.

Death of Lambs.—I want some information regarding the loss of lambs from a flock of six Leicester ewes, 4 years old, having raised only one from 9 dropped this spring, and but little better luck for the last two years before this. They have the range of 60 or 70 acres with cattle, and come to barn in autumn, in good, first rate condition. They are wintered solely on hay—no grain. Do they fall away during winter, and require graining? Have never grained them, fearing they would become too fat for breeding. What would be the effect, if fed a small quantity of roots and grain daily through the winter or till lambing comes on? C. P. Bates.
Richfield, N. Y.

Answer to G. M., *Conn.*, who wishes to know the best and easiest way to furnish water for his ducks, as there is no water in his yard. Set an old tin pan in some convenient place, and keep it full of fresh water, or a better way would be to dig out a good sized trough, and sink it in the ground to within an inch or two of the top of the trough. Then with an adjustable conductor extending from the pump to he trough, his ducks might be supplied with water at a trifling expense, and amusement furnished his children at the same time. Raising ducks to sell, may be profitable in Connecticut, but my husband thinks it is not in Iowa.

Benton Co., Iowa, May 21. AVIS.

Disease of a Horse's Eye.—I have a fine five year old horse which has a queer discharge from the left eye. It has now been running near five months. Sometimes it is as clear as water, (more I think when at work,)—again, thick, white and ropy. The eye itself seems unaffected, nor are the lids. I suppose it is a cold in the head, and the discharge accompanying it makes its way through ducts of eye and vicinity. He had some cough, but when hay was dampened it has stopped. Can you favor me with your opinion.

Sabbath Rest, Pa. J. P. BELL.

What will Destroy Hen-lice?—In the spring my hen-house is so full of lice that I am obliged to shut it up, and to keep my fowls out of it until some time in the fall. In the spring of 1861, I set a hen in it, and after she had set about a week she was so covered with lice that she could not keep her nest; and we lost the eggs, or rather the chickens, which we expected from them. The hen we greased with *fresh* lard, but it would take too much lard to grease the whole of the hen-house. What else is there? A Reader.

Wind Mill.—Will you or some of your correspondents inform me through the Co. Gent., who had the wind mill at the State Fair last fall? r. b. u. *Clinton Corner.* [We observe that a prize was awarded to Merrill & Wood, Norwich, N. Y., on "best arrangement for raising water other than pump," but we have quite forgotten what sort of "arrangement" it was.]

Fruits Intermixing.—A subscriber in Kansas sends quite a long string of queries, over the signature of Novice, several of which are necessarily deferred for the present. He writes: "Will fruits of any kind, especially grapes and strawberries, be changed in character or kind by planting various kinds in close proximity to each other?" [The only effect of proximity is upon the *seed* or rather upon the product of the seed when sown. Two varieties of grapes or of strawberries planted so closely together as to intermingle their leaves and fruit, will always remain just as distinct "in character and kind" as they ever were; but the seeds of either variety if planted will be likely to produce seedlings partaking of the joint nature of both the parent sorts.]

Book on Flower Gardening.—What book do you recommend for information on the garden cultivation of flowers? r. s. *Madison Co.* [Breck's Flower Garden, which can be sent post-paid from this office for $1, will probably suit your wants more nearly than any other work.]

ALBANY COUNTY AG. SOCIETY

At a special meeting of the "Town Union Agricultural Association," held at the village of Clarksville on the 7th June, for the purpose of re-organizing, the following steps were taken:

The title of the Society was changed to the "Albany County Agricultural Society," and a Constitution adopted to comply with the act entitled, "an Act to facilitate the forming of an Agricultural and Horticultural Society," passed April 13, 1855. The following named are the officers for the first year:

President—JURIAN WINNE, Bethlehem.

1st Vice Prest.—James W. Jolly, Coeymans.

Vice Presidents—Luther Tucker, Martin Hallenbeck, Geo. Young and Jacob Simmons, Albany; James Reamer and Ira Boyington, Bern; John H. Booth and David Van Allen, Bethlehem; Wm. Tuttle and John Burhans, Coeymans; Peter Shaver and Abm. V. Mynders, Guilderland; Stephen Mercelus and Elon Gallup, Knox; Robert Taylor and Geo. W. Bender, New Scotland; Judson Conklin and James E. Mackey, Rensselaerville; Dr. P. B. Noxon and C. P. Williams, Watervliet; Chas. Bently and Jacob Dorman, Westerlo.

Secretary—Samuel C. Bradt, Albany.

Treasurer—William H. Slingerland, Bethlehem.

Directors—L. G. Ten Eyck and John Sloan, Bethlehem; O. H. Osborn, Watervliet; Alex. E. Willis, Coeymans; Henry Creble and David Callanan, New Scotland.

Description of an Artificial Fish Pond.

Stephen H. Ainsworth of West Bloomfield, in this State, who is well known as a successful fruit-grower, is also, it would seem, devoting his attention with equal success, to the breeding of fish. The editor of the Rochester Democrat, who visited Mr. Ainsworth recently, gives the following account of his operations:—

The pond covers something over sixty rods of ground, and is filled by conducting the water, from thirteen different springs, in tile laid under ground, and brought into pools a short distance above the pond. From thence it flows over a prepared bed of gravel to the pond. Perhaps one man in a million might have thought that a fish-pond, and above all a place for speckled trout, could have been made in the spot where this is located. The water is fourteen feet deep in the main pond, and this depth has been secured by excavation—the original depression being very slight, although the spot was swampy and of little value. As a means of saving every drop of the small supply of water, two parallel walls have been built around the pond, sunk into the blue clay, and the space between them grouted, so that not a drop is wasted except by solar evaporation. At the bottom, large stones are placed in positions to afford hiding places for the trout whenever they choose to retire from the hot sun. In this respect Mr. Ainsworth has studied the habits of his finny stock, and as far as he could, compensated them for removing them from their native streams in Victor, Springwater, and other places, where they were captured. The walls around the pond are carried to the height it is intended the water shall reach, and then a sufficient quantity of earth placed over them to sustain shade trees, a large number of which are in a thrifty condition. The water comes into and passes from the pond through fine sieves, through which nothing but the water can pass.

Inside of the parallel walls there is a slope wall, and from the top the ground recedes in all directions so that no surface water is washed into the pond. In places where it is likely to stand too long it is carried off by tiling. Altogether, it is a perfect gem. Nothing has been neglected, and those who have the facilities, the good taste and enterprise to follow Mr. Ainsworth's example would be greatly aided by paying him a visit. He will, we run no risk in assuming, take great pleasure in giving them the benefit of his experience.

It is, so far as we are advised, an unsettled matter how many fish can live in a given quantity of water. Mr. Ainsworth has placed nearly eleven hundred trout in his pond, and some additions have been made by the process of artificial fecundation; and this process he will continue to follow until his pond is sufficiently stocked. The spawn last year placed in the pools prepared for the purpose was mostly covered with sand or washed into still water, so that from thirty thousand eggs only about one hundred young fish—now an inch long—have been discovered. He will no doubt be more successful with future experiments. We have an impression that the most successful experiments have been made by using a succession of boxes, through which the water runs over gravelly bottoms, and into which the sand and earth is not washed. If it were possible to protect all the spawn deposited by the small number of trout now left in our streams, we should quickly see them re-stocked to their full capacity. But it is known that even under the most favorable circumstances only a few of the eggs hatch, and of those which do much of the product is devoured by snakes, water foul, and the larger fish. It would be a very easy matter to resort to artificial fecundation, by which an immense quantity of the most beautiful and delicate fish known in American waters could be raised.

But to the sport. Both bait and fly were taken the instant they touched the water, and had a hundred hooks been upon each line. each one would have its victim. They were of various sizes when put into the pond two years ago. Those of three years are now plump pounders. A majority are of three-fourths and half a pound. Mr. Ainsworth knows their ages as well as those of his colts and cattle. In swift running water, however, they do not grow as rapidly; they are longer and less plump. There are a few two and three pounders, but here as in other waters, these seldom honor the angler's hook with a nibble. Of course we could not think of following up the sport for only a few minutes—just long enough to try the game of the ten noble fellows which were seen in the show window of the Arcade House yesterday. And they were game. Every one of them made the rod bend and tremble. The females were invariably returned to the water. But more exciting sport remained. The food for their evening repast was now dealt out by spoonsful at a time, and the moment it struck the water dozens of great fellows darted for it. They knocked against one another under the water and above the water, and a person standing close to the edge would in five minutes be well "spattered" from head to feet. The "whipping" had made them a little more shy than usual, but they will feed from the hand of their owner, and leap from the water when shown their food upon a spoon!

Mr Ainsworth is a public benefactor in what he has done. While constructing and filling a pond, at a large expenditure, for his own amusement and gratification, he has demonstrated the fact that, under circumstances more favorable as regards water and places for making ponds, immense quantities of the most delicious food can be raised at almost a nominal cost. When this country becomes as populous as France such advantages as we possess for the propagation of fish will be appreciated and improved. Until then we can only hope too see here and there a liberal and public spirited citizen like Mr. Ainsworth set the example.

[For the Country Gentleman and Cultivator.]

CORN AFTER BUCKWHEAT.

MESSRS. TUCKER—Your correspondent, E. L. HOLDEN, asks "brother farmers to give their "experience" on raising corn after buckwheat." I well recollect, when a lad, that my father plowed and planted a field to corn, on a small portion of which was raised buckwheat the year previous. The soil of that part on which the buckwheat grew was precisely like that of the other part, and the crop on this latter, which preceded the corn, I think was rye. It was all plowed and otherwise treated alike; no manure on any of it. Now for the result, which was very much like that of Mr. Holden's labor, only "more so," for on the buckwheat land corn enough was not obtained to plant the same ground again, while on the other part a fair crop was raised.

Again, I know a man whose farm is not a hundred miles from mine, who insists that corn can be raised after buckwheat, and that the buckwheat makes no difference with the corn crop. He has tried it under my own observation, and has succeeded in raising some corn, a fair crop, but then he takes land already in a high state of cultivation, and by manuring highly, and perhaps applying other fertilizers, he does raise some corn after buckwheat, but in all probability not near the amount he otherwise would by applying the same manure, &c., on land not immediately preceded by a crop of buckwheat.

Your correspondent to whom I allude, says he would like to know the reason why corn cannot be raised after buckwheat. I cannot give you the reason, but will say that facts are stubborn things to contend with, and I think we can more profitably spend our time, labor, &c., than by trying to raise corn directly after buckwheat.

Belchertown, Mass. HOMESPUN.

THE OLD PEAR TREE.—The old Stuyvesant pear tree, (175 years old,) corner of East Thirteenth Street and Third Avenue, New-York, is again in blossom, and appears more profuse in its blossoms than for years past.

FARMING AT THE EAST vs. WEST.

The following is an extract from an address upon the Agricultural prospects of New England, delivered by the Hon. DANIEL NEEDHAM, at Stanstead, C. E., on the 22d ult.:

"When the young man leaves his New England home, and with wife and children emigrates to the far West, what influences move him? Is it not the bold statement that the virgin soil of that distant land readily produces fifty bushels of corn and forty bushels of wheat to the acre? Is it not for this prospect, that he leaves all his old associations, the land of his birth, the land of abundant schools and churches, the land of good roads and great comforts, to suffer privations in a new country, where school-houses, churches and roads are to be built? The question he should put to himself is, will I better my condition by emigrating? If the land is more productive of corn and wheat in Illinois, Wisconsin and other Western States, is it more productive of money? Admitting fifty bushels of corn can be raised to the acre, do we not raise that quantity on many farms in New England? According to the census of 1850, fifty bushels was the average of the State of Connecticut. But if you raise fifty bushels, how much money will it bring? At this very moment, within sixty miles of Chicago, corn can be bought for twelve cents a bushel. Fifty bushels at twelve cents a bushel, will give you six dollars; and in order to produce this paltry sum of money, you must plow, harrow, hoe, harvest, shell and market an acre of corn. What will your acre bring you in Vermont? Corn is now seventy cents a bushel; and if you raise fifty bushels, as you should if you are a good farmer, your acre will produce you *thirty-five dollars.*

How is it with wheat? Wheat is now worth within sixty miles of Chicago, sixty cents a bushel. The average crop of Illinois is less than twenty bushels; and for your acre you will realize less than twelve dollars. In Vermont, our average crop is seventeen bushels, which to-day is worth one dollar and twenty cents a bushel, yielding for the acre, twenty dollars and forty cents.

But suppose you convert your corn into pork, will that help the matter? Pork has been selling this entire winter, within sixty miles of Chicago, at two cents a pound.

The man who leaves Vermont and goes West to get rich by agricultural industry, makes a sad mistake. Northern men have gone West and secured wealth, but it has been by fortunate investments in real estate. Such men can be found in every school district of our State, men who by fortunate speculations have amassed wealth. But the time is far in the future, when men, by legitimate agricultural industry in the West, will reach the coveted goal of wealth."

Plowing Heavy Lands.

It would be interesting and important to know what would be the comparative results, in regard to the crops produced for three years, between lots plowed in furrows of fifteen inches and others of ten inches wide, on the soil alluded to. It is a rule in England and Scotland, as well as in some parts of this country, to plow clay land in as fine or narrow furrows as practicable, in order to produce the required friability, and give due exposure to the atmosphere, which is so necessary to develop the fertility of such soils. It may be said that the width of the furrows was not greater than usual in proportion to the depth. On this point it may be inquired whether the expediency of plowing sward to this depth has been demonstrated? Would it not be better, especially on clayey soils, to bury the sward at only a moderate depth, where it would more quickly decompose, and give more immediate benefit to crops—plowing deeper, if necessary, afterwards? Such is the practice in some sections distinguished for successful farming.—*Boston Cultivator.*

☞ The Irish Farmer's Gazette estimates that nearly a million of dollars were spent last year, by the farmers of Ireland, for "spurious manures."

SHADE TREES.

Eds. Co. Gent.—I wish that either you or some one of your numerous contributors, would give us an article upon Shade Trees, the proper time for transplanting, and the after cultivation. I think it is a subject that would interest all your friends, and it most certainly is a very important one. Nothing, I think, adds more to the comfort of the homestead, than fine large shade trees about the house. Ride over the country, and how many places you will see without a tree near them, the hot summer sun beating down upon the unsheltered walls, as if trees were not given on purpose to make our dwellings comfortable. But how pleasant, after going over miles of our bare country roads, to come upon a place where some farmer lives who is alive to the beauties of nature, and has planted a row of trees by his road-side. You almost unconsciously give him your blessing as you pass. At the same time almost every one is willing to acknowledge how much trees add, both to the *looks* and the comfort of a place; but "oh, its too much trouble," or "I have not time," or "it costs more than it will come to," is the almost invariable answer you will get to suggestions of improvement.

Let every man then, that owns a place, make it his business the coming fall, when work is not driving, to set out trees around his house, and by the road side, and my word for it he will not repent it. Let every one do this, and in a few years, instead of desolate "*pikes*," our roads would be perfect avenues, and it would be as it ought, a pleasure to ride about. R. *Sullivan Co., N. Y.*

If every land owner entertained the same views as our correspondent, we should see a beautiful country in a few years. It is strange that men who have no appreciation of rural ornament, should not perceive that their farms would be thus increased ten times as much in market value, as the cost of planting the trees. We invite all our readers to give attention to the subject, and to read the articles on pages 37 and 40, of Rural Affairs, vol. 1; and on pages 225, 233, 246, 250, &c., of vol. 2.

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MANAGEMENT OF CUTTINGS.

The following directions by Mr. A. S. Fuller, on the management of cuttings, made at a recent meeting of the Brooklyn Hort. Society, will be interesting to our practical readers:

Hardy cuttings—that is from out-door hardy wooded plants, such as currants, will succeed best if made in September when the wood is ripe; they are cut just under an eye or bud and left about six inches long—planted in rows about two inches apart in the rows; by spring they will be ready to make a large growth. Be sure to pack the earth in tight at the bottom of the cutting or they will not succeed. In this way most of the hardy out-door plants can be propagated, such as the Rose of Sharon, Spireas, Deutzias, &c. For the *grape* two eyes are best, the top one nearly covered.

The Delaware grape, which is one of the hardest vines to propagate, can be readily done by taking small cuttings before the frost and planting where they are to grow, covering well during the winter with leaves, &c., and by spring they will be well calloused over and ready to make good shoots. Of soft-wooded plants, take off part of the old wood along, and they will root more readily. Quince and other things of that kind will do better this way. Evergreens, such as the Arbor Vitæ, Juniper, &c., if small cuttings are put in a frame out-doors and covered with a sash, whitewashed, they will grow very easily. Some kinds of plants will grow best and only from cuttings of the roots, such as the Paulownia, Spireas, Blackberries, Raspberries, &c. Peach will grow readily in Georgia from cuttings, but here the winters are too long and cold. The most favorable state for cuttings to grow in, is when the roots will form and not produce any foliage. Layers are so near a cutting that he said he would mention a few ways that were practiced—by bending a branch down and covering with earth late in the fall, they will root the first year; to facilitate the rooting they are partly cut through, so that the earth can come in contact with the inner bark. He showed a Pink which had been treated in that way in August, and now it was a perfect mass of roots, and ready to be separated from the old plant and put in a pot; if this had not been cut, it would not have rooted in two years. Layers from evergreens can only be made while the sap is in full vigor, for if cut at any other time, they will throw out the resinous matter and prevent the sap from forming roots. This is why so few of the gardeners succeed in raising choice evergreens.

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[For the Country Gentleman and Cultivator.]

Buckwheat as a Green Manure.

In the article on Corn after Buckwheat, in the Co. Gent. of April 10, it is said that "buckwheat profits from the manure which is laid on for a succeeding wheat crop, and which ripens and becomes suitable for the nourishment of wheat." In reply to this, our correspondent, A. W. W. of Chester Co., Pa., says:

Twenty or more years ago, having seen the same thing recommended as often perhaps as once a year from my boyhood, I determined to try it. Accordingly a six acre lot was limed, manured, and sown with buckwheat in the month of June. When it was in full bloom, it was harrowed down and plowed under, and in due time sown with wheat.

An aged neighbor who owned the adjoining land, but who knew nothing of chemistry, and probably could not spell the word, predicted confidently that the wheat would do no good. He had tried it, and he thought the buckwheat poisoned it. And so the result seemed to show. Poisoned it was, certainly. When we went to cut the wheat, the old neighbor was on the ground, pleased, as most prophets would be, to see their own predictions verified. He called it "streaked." I considered it too near a total failure to ever attempt a repetition of the experiment. I have time and again since then seen the same thing recommended, but my own testimony has been and is in agreement with my old neighbor's, "It is poison."

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CURE FOR WARTS.

Bathe the hand having warts in warm water, dry with a soft towel, and touch the top of each wart only with aquafortis; a knitting needle or anything having a small point will answer to take up a small drop sufficient for each wart. In a few days a dead pelicle will be formed on the top of the warts, which will scale off when bathed in warm water. When this is removed apply the aquafortis again, and so on repeatedly, till the entire wart is reduced to a level with the true skin. This mode is effective, and without pain. The wart so treated will never come again; but care must be taken that the aquafortis does not touch the true skin about the wart, as it may blister it.—*Irish Farmer's Gazette.*

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☞ In the Report of the Ithaca Farmers' Club for 1861, submitted for publication in the Transactions of the State Ag. Society, we note the following reference to the subject of the collection of Agricultural Statistics:

"We are looking forward hopefully to the operation of the law of the present session for the collection of Agricultural Statistics throughout the State, and cannot doubt that the Agricultural interests of the State will be greatly benefitted by the information thus obtained, if the law is faithfully executed. And as its execution will depend to a great extent upon the active co-operation of the various Agricultural Societies of the State, we take pleasure in embracing the present opportunity to pledge the earnest co operation of the Ithaca Farmers' Club, in carrying the law into effect."

SHOW & SALE OF SOUTH-DOWN SHEEP.

Providence permitting, my 12th Annual Sale of Yearling Rams, and Ram and Ewe Lambs, will take place on WEDNESDAY, SEPT. 3d, 1862. at my residence, 2½ miles from Holmdel, Monmouth Co., New-Jersey.

Having now a flock surpassed by none in any country, for thrift, weight, wool, and fine quality, I with confidence invite the attendance of sheep-growers at the above mentioned time.

Please send for Circular.

Particulars about Railroads, Steamboats, &c., will be given in August papers, as well as in Circular. J. C. TAYLOR.

June 1—m2t. Holmdel, N. J.

IMPROVED LIVE STOCK FOR SALE.—

SEVERAL YEARLING SHORT-HORN BULLS.

BERKSHIRE PIGS FROM SPRING LITTERS.

L. G. MORRIS, Scarsdale P. O.,

May 29—w&mtf. Westchester Co., N. Y.

SHORT-HORNS AND ALDERNEYS

FOR SALE.

The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,

Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

PREMIUM CHESTER COUNTY WHITES.—

THOMAS WOOD continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. Address PENNINGTONVILLE, Chester Co., Pa.

April 3—w1y—June 1—m1y.

A SURE CURE WARRANTED OF DIPHTHERIA,

Sore Throat, or Nursing Sore Mouth, by the use of Mrs. SARAH LOHR'S "DIPHTHERIA CURE." If used according to direction on each bottle, at an early stage of the disease, WE WARRANT A CERTAIN CURE, OR REFUND MONEY IN ALL CASES.

Use it. It will save LIFE and MONEY.

No physician needed. A swab, FREE, with each bottle. Two sizes of bottles, 35 and 50 cents, singly; $2.25 and $3,50 per dozen at wholesale, cash.

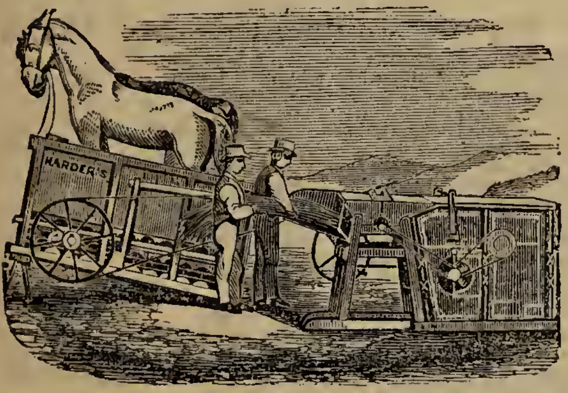
Send for our numerous certificates, or get them of your Druggist. Sold by Druggists everywhere. Or address LOHR & CO.,

May 1—w5tm2t. London, O.

BUY THE BEST

AT THE

EMPIRE AGRICULTURAL WORKS.



The undersigned manufacture Changeable Endless Chain Railway

HORSE POWERS,

COMBINED THRESHERS AND CLEANERS,

Threshers, Separators, Wood-Saws, &c.

These Powers produce more power, with less elevation, and are operated with greater ease to the team than any other, requiring very slow travel of Horses, being only about one and a half miles per hour when doing a good fair business, which is about 400 to 500 bushels of Oats per day, or half that quantity of Wheat or Rye.

The Thresher and Cleaner runs still and easy, separates the grain perfectly clean from the straw, cleans quite equal to the best Fanning Mills, leaving the grain fit for mill or market, and is capable of doing a larger business without waste or clogging than any other Two Horse Cleaner before the public.

☞ For price and description send for Circular, and satisfy your self before purchasing. Address R. & M. HARDER,

June 5—w1tm1t. Cobleskill, Schoharie Co., N. Y.

Agricultural Books for Sale at this Office.

CHESTER COUNTY PIGS FOR SALE.—

SAMUEL HILL, Jr.,

Florence Nursery, Florence, Mass.

June 12—w1yr.*

AYRSHIRE STOCK AND PRINCE ALBERT PIGS FOR SALE.

THOROUGH-BRED AYRSHIRE STOCK, from Importations of choice animals in 1859.

PRINCE ALBERT PIGS from Imported Stock, in pairs not akin.

Address CHARLES M. POND,
Hartford, Ct.

REFERS TO

E. H. HYDE, Esq., President of Connecticut State Ag. Society, Stafford, Ct.

SANFORD HOWARD, Esq., Editor Boston Cultivator, Boston, Mass.

MASON C. WELD, Esq., Editor of American Agriculturist, New-York. June 12—w4t.

"KITTY CLYDE."—I offer for sale the above named

THOROUGH-BRED FILLY,

four years old, 15 hands, half an inch high—color chestnut sorrel. She was got by celebrated race horse REVENUE out of Rosabel, by imported Consternation; grand dam Madam Celeste, by Andrew; great g. dam Lady Flirt, by Old Hickory; g. g. g. dam by Durock, sire of American Eclipse—g. g. g. g. dam by imported Baronet, &c.

She is broken to ride, and is in fine condition to put in training, and her form and action indicate that she will make a first class race horse. JAMES R. REES, Clyde, Wayne Co., N. Y.

June 5—w4t.

SHORT-HORNS FOR SALE.—

Two Bulls—one two years old, sired by Neptune, 3192, (11847,) dam Isabel—one yearling, sired by Neptune, 3192, (11847,) dam imported Finella. Also, several Heifers, Bull and Heifer calves.

The subscriber, on application by mail or otherwise, will furnish catalogues containing pedigrees, &c. Address the subscriber, Postmaster at Norman's Kill, Albany Co., N. Y.

May 22—w6t. WM. H. SLINGERLAND.

ITALIAN BEES! ITALIAN BEES!!—

I will send an ITALIAN QUEEN for Five Dollars and guarantee her safe introduction among the Native Bees, if directions are followed. Address CHARLES E. HALLENBECK,

May 15—w6t. Germantown, Columbia Co., N. Y.

ALDERNEY COWS, CHINESE SHEEP AND WHITE CHESTER PIGS

for sale. Apply to WILLIAM REDMOND,

May 1—w13t. 45 Barclay-St., New-York.

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We know of no works which afford so much Practical Information on the subject of American Agriculture, which can be procured for double the cost, as the Third Series of "THE CULTIVATOR," the 9th vol. of which is now completed. The price of the Nine volumes, handsomely bound in muslin, is 75 cents each at this office, or $1.00 each sent by mail, post paid. Either volume from 1 to 9, can be had separately at the same price. The Nine volumes will be sent per Express to any part of the country, on receipt of $6.75.

A FIRST PREMIUM SHORT-HORN BULL,

COTSWOLD SHEEP AND AYLESBURY DUCKS,

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March 20—w1yr.

CHESTER COUNTY PIGS.

The undersigned continues to execute orders as heretofore for his pure stock of the above celebrated breed, which will be carefully shipped to any point of the Union, in pairs not akin.

The selections are made only from pure bloods, and chiefly from premium animals which have been uniformly successful at our local Fairs. He refers to purchasers from him in all sections of the Union.

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SHORT-HORNS FOR SALE.—

I have for sale a few

BULLS, BULL CALVES,

COWS AND HEIFERS

mostly by the Duke of Gloster (11382) and by Grand Duke of Oxford (16184.)

ALSO A FEW ALDERNEYS.

JAMES O. SHELDON.

Dec. 19—wtf. White Springs Farm, Geneva. N. Y.

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SWAN AND FALLOW DEER.—Just imported from Holland and for Sale:

One Buck and three Does, Fallow Deer. Price, $275.

Two Does, heavy with young, $90 each.

Buck and Doe, not with young, $70 each.

Pair Mute Swan, 3 years old, $40.

These prices include cage and delivery in New-York, at either of Express Offices, Depots, or on board vessel. By enclosing amount, birds or animals will be forwarded at once, if not previously disposed of—if sold, the money will be returned. Apply to

June 19—w1t. C. N. BEMENT, 66 East 29th Street, New-York.

PARTNER WANTED—To go into the Nursery business and raising of small fruits.

To any one with some capital, understanding the nursery business this is a first rate chance.

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Twenty Dollars per Thousand.

Mr. Knox writes under date of Pittsburgh, Pa., March 25, 1862:—

Mr. Nicholas Hallock—Dear Sir: I used your boxes last season for carrying Strawberries, and other small fruits, long distances with entire satisfaction. They are the right shape—light, strong, and well ventilated. I do not see how they can be improved.

Yours truly, J. Knox.

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June 19—w6t.

THE "EASY WASHING MACHINE."—

H. P. BRIGGS,
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This machine now takes the preference over any other introduced to the public—1st. For the ease with which it can be operated; 2d. For the manner with which it does its work, and 3d. For the price for which it can be obtained.

Address as above for all farther information. June 19—w1t.

CARD.

DAVID LANDRETH & SON,
PHILADELPHIA,
PROPRIETORS OF BLOOMSDALE,

issued on the 1st inst. their

TURNIP-SEED CIRCULAR,

for the present year. It is addressed

Exclusively to Dealers in Seeds,

and all such, who desire a copy, whether Druggist, Country Merchant or Seedsman, will be supplied by mail, on the receipt of address written on a letter envelope, with one cent stamp attached.

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"At no previous time has the promise been greater for full supplies of Seeds. The late mild winter was propitious for the preservation of all roots designed for seeding, and each acre of our grounds (nearly 400 in extent) gives promise of a prolific harvest; under these favorable circumstances, we feel disposed to admit our customers to a share of our good fortune, and shall accordingly reduce the prices of most leading articles."

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FRENCH WHITE ZINC PAINT,
MADE FROM
PURE METAL,
BY THE
Vieille Montagne Co. of Paris,

Superior in all respects to Lead or American Zinc.
Is free from the unhealthy effects of Lead.
White zinc will not turn yellow or peel.
Gasses of any kind do not affect its color.
Will cover one-fourth more surface than lead.
For contractors it offers great economy.
Colors with zinc bases retain their brightness.
Walls tinted and panelled cheaper than paper.
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When properly laid will be smooth as marble.
Use spirits for dead white, varnish for gloss.
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Is adapted for outside and inside work
Cover knots with size or gum shellac.
Use only Zinc for priming and first coats
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No. 1 White is Red Seal. Snow White, Green Seal.
Be sure the seals are found unbroken.
Packed dry in barrels, 220½ and 441 lbs.
Mixed in oil, in 25, 50, 100, 200 and 500 lb. kegs.
Snow white in Poppy seed oil for last coat—extra.

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Sole Agent Vieille Montagne Company,
Oct. 3—weow7t. No. 42 & 44 Greene-street New-York.

COOK'S IMPROVED PORTABLE SUGAR EVAPORATOR.

The subscriber has received from the proprietors the sole agency for the sale of COOK'S IMPROVED PORTABLE EVAPORATOR in the following counties:

Chester, Delaware and Montgomery in Pennsylvania.
Burlington, Camden and Gloucester in New-Jersey.
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And also an agency for the sale of the MOST IMPROVED CANE CRUSHERS for horse or water power. A limited amount of pure CANE SEED on hand for distribution.

For information about the cultivation of the cane and its manufacture, send for circular. MILTON CONARD,
March 20—wtf. West Grove, Chester Co., Pa.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY, N. Y., AUGUST, 1862. No. 8.

PUBLISHED BY LUTHER TUCKER & SON
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

THE CULTIVATOR has been published twenty-eight years. A NEW SERIES was commenced in 1853, and the nine volumes for 1853, 4, 5, 6, 7, 8, 9, 60 and 61 can be furnished, bound and post paid, at $1.00 each

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

EDITORIAL CORRESPONDENCE.

Scattered Notes of Travel.

FARMING NEAR PHILADELPHIA.—The condition of agriculture in the immediate neighborhood of Philadelphia and the adjacent counties, has been long known, in many respects, as unsurpassed in any portion of the country, and hence even an imperfect report of its peculiar character and excellence, can hardly fail to prove interesting to the readers of the COUNTRY GENTLEMAN. It was with much satisfaction therefore that I accepted an invitation from my kind friend SAMUEL RHOADS, (widely known for his literary ability as editor and publisher of *Friend's Review*,) to visit some of the best farms in the neighborhood of West Philadelphia, and he generously devoted a couple of days to accompany me to several of these places. Near the city, most of the farms are small; and a large share of their profits arise from milk dairies or the temporary pasturage of the large droves of cattle on their way to the markets of the city. Outside of these, are many excellent farms, and I regretted that time would not allow me to visit but very few. The first was that of

JACOB P. JONES, three or four miles west of the Schuylkill. The country eastward is nearly level, rendered slightly undulating by streams, but at this place rising in a fine ridge—on the slope of which the residence is handsomely situated. It is a new dwelling, built of gneiss, and is a fine specimen of home-like comfort, combined with a sufficient amount of elegance. The view towards the city is rarely equalled for its character of richness and repose, luxuriant woodlands, round headed scattered trees, and fertile fields, mingling in the formation of a landscape of great beauty, beyond which the partly hid spires and domes of Philadelphia connect land and sky together. One can hardly realize that so quiet and rural a place is so near the noise and dust of a city of half a million people.

The grounds were finely ornamented with some rare trees—among them a fine Magnolia grandiflora, 12 feet high, in a vigorous state of growth, but requiring winter protection; and a Magnolia macrophylla, about the same size, in full bloom, the larger flowers of which measured one foot in diameter without spreading the petals. The leaves were two feet long and ten inches wide. Several of the newer sorts of strawberry are cultivated, among which the Wilson is decidedly preferred for its reliability and productiveness, and good flavor when allowed to become well ripened. The Triomphe de Gand has not succeeded very well.

The owner has retired from a lucrative city business, and makes farming a pleasant as well as profitable amusement. He keeps careful accounts, and his balance sheet shows a handsome profit. He occupies a farm of one hundred acres, which has been held by the family since its first occupation in the days of William Penn. It is in the form of a parallelogram, and is handsomely and regularly laid out with a tier of fields on each side of the central lane, so that all are readily accessible. The fences are all neat post-and-rail—those next the highway with four horizontal rails, and the rest with three—all being about four feet high. They cost here about $1 per rod, and last 15 or 20 years, the posts then requiring renewing. A regular rotation is adopted. It consists of 1. Corn (with a portion of the field with potatoes) on sod, with manure. 2. Oats after the corn, and rye after the potatoes. 3. Wheat, manured, seeded with clover and timothy. The fields remain longer or shorter in grass, according to the proportion of hay and pasturage needed. This term is usually four or five years, as hay and pasturage constitute the best of the profits. About 13 quarts of a mixture of clover and timothy are sown on each acre. The meadows average at least two and a half tons. The owner expects to sell a hundred tons of hay this year from this moderate farm, besides all that is needed for home use. The price is now $15 per ton in Philadelphia, which will be $1,500 for the crop sold. When higher in price he has realized over $2,000. To keep up the fertility of the land, he makes it a rule whenever a load of hay is drawn to the city, to bring back a load of manure.

The owner of this farm plows deep, and subsoils down to a depth of about fourteen inches—he is "not afraid of deep plowing." Corn usually yields about 60 bushels per acre, and oats from 60 to 70 bushels. Wheat produces about 25 bushels, sometimes 28. Rye is chiefly valuable for its straw, which, when thrashed with flail, sells at $15 per ton in the city. A broadcast dressing of guano in the spring on grass, especially if it can be given just before a rain, and costing three or four dollars per acre, affords a handsome remuneration in the increase of growth.

The two worst weeds are garlic and oxeye daisy. The former is eradicated by pulling out—the latter by good cultivation and heavy seeding to grass. On one-half of a recently seeded grass field, where the seed was applied evenly and heavily, not a daisy was to be seen; on the other part, where the seeding was lighter and more uneven, the surface was considerably whitened by this weed.

The barn is of stone, about 50 by 65 feet, with three stories, like the best three storied barn described in the last number of the Illustrated Annual Register. The upper story, reached by a nearly level bridge and embankment from the rising ground on one side,—is occupied by the threshing floor, from which the hay is pitched *downwards* into the bays on each side; the unthreshed grain is deposited on the hay when these bays are filled above the level of the floor. When threshed and cleaned, the grain is passed down into the granaries in the middle stories. The basement contains the stables. The owner would make an improvement in erecting another barn, by placing the *gable* towards the rising ground, so that the upper floor might be still higher or between the rafters. By this arrangement, loads of hay and grain might be drawn still higher up, and downwards pitching more completely accomplished.

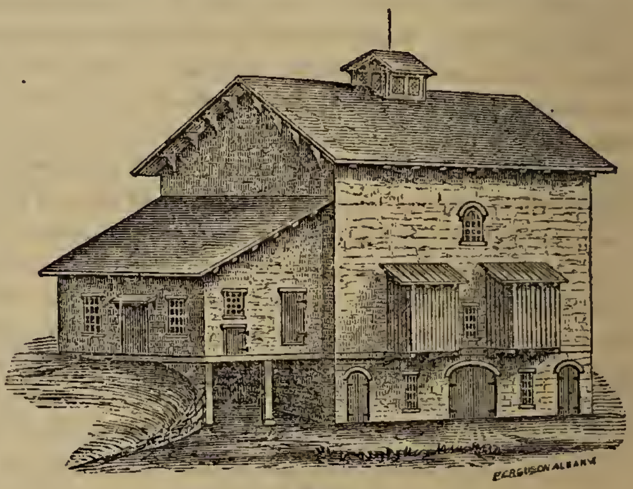
The cost of cutting hay with a machine, drying, collecting with a Pennock's spring-tooth rake, and drawing into the barn, does not in any case exceed a dollar and a quarter per ton, according to the accurate accounts kept of expenditures. Pennock's rake runs on wheels, and the operator drives over the ground by riding on the machine, and touching a lever at each discharge of hay,—with about as much ease as a lady sits in her arm chair and drives her fan. The long curved steel teeth collect the hay in such a manner as to leave it in a loose heap, and not rolled and packed together as is done by the common revolver.

But few cattle are kept in summer, but many are wintered, for the purpose of consuming the straw and affording a supply of manure. I observed the men employed in forking over the accumulations of last winter, consisting of a compact bed, as wheeled out, some 80 feet square, and about three feet deep. When loosened by forking, it formed a pile about six feet high—that is it was loosened to about double bulk. Fermentation was thus produced and foul seeds destroyed. Manure from the city is supplied at the fields at a cost of about two dollars per ton. The teams on their way back from the city after drawing in hay, bring about one ton for each horse. Among the fine cattle observed in the fields, was a very handsome cow, a cross of Durham and Alderney, which makes twelve pounds of butter per week. She resembles somewhat in form the figure of the celebrated Oaks cow, but with greater symmetry and beauty. Water is supplied by means of Halliday's windmill (smallest size costing about $80,) one day's pumping being more than enough for a week's supply. This windmill has needed no repairs, although it has run several years.

I was much pleased with the excellent spring house—a structure, by the way, deemed indispensable to a good dairy in this part of Pennsylvania. This one, although intended only for a dairy furnishing a home supply, was some 20 feet square, and as clean as pure clear cold water, granite rock, and a hard burnt brick floor could make it. A spring, large enough to fill a two-inch auger hole, boiled up in a sort of artificial rocky cavern, and flowing out, spread over the brick floor to a depth of about two and a half inches. Walks of handsomely dressed flagging, above the water, give ready access to the pans standing in the crystal water. A striking proof of the absolute necessity of pure air, as well as other requisites of cleanliness, for success in butter making, was afforded by the accidental deposit of a pile of manure some rods distant, the fumes of which were occasionally wafted by the breeze towards this spring-house. For a week, all the butter made was quite poor in quality, until the cause being discovered and removed, it was restored to its original excellence and sweetness.

One word in conclusion, as to the profits afforded by this farm. It furnishes a handsome family supply, and *over and above all that the family consume, yields from seven to nine dollars per acre as an average.* In 1861, it gave $7 per acre; in 1859, $9.

Farm of Israel W. Morris, Merion, Delaware Co., Pa. This is a large and beautiful farm of 240 acres, situated some five or six miles from Philadelphia, and is probably worth $500 per acre in market. The proprietor, now 85 years of age, has withdrawn his personal attention mostly from it, and it is cultivated under the direction of his son Wistar Morris, who is well known for the many responsible offices and trusts he holds in financial and benevolent institutions. Among other objects worthy of special attention, is one of the three barns, which in many respects is a model. Like all the best barns in this region, it consists of three stories, and is built of stone in the most substantial manner. Blocks of gneiss, nine or ten feet long, and fifteen inches square, form the pillars or posts for the sheds and open spaces; and longer strips of the same rock constitute the outer sills of the large doors. The accompanying view will nearly show its general structure and arrangement. The basement is devoted to stables—the carriage house is under the left wing. The central double doors in the basement, seen in the cut, open a passage under the granaries in the second story, under which the wagon is placed for receiving the grain through a trap door. The two projecting portions on each side of the granary are the corn cribs, enclosed by vertical slats on three sides, and the floor is supported by projecting timbers; and being placed on the south side of the barn, the corn is soon rendered dry. These cribs are readily filled by shovelling downwards from the cart or wagon on the floor of the third story. On this floor the grain is thrashed by means of an endless chain horse power; and as soon as cleaned is shot down into the granaries below. Straw and hay are also cut, and grain ground, on the same floor, and passed down through shoots to the animals in the basement. Large bays for hay and grain are on each side this floor, to which the loads are pitched downward; two men have emptied a large load of hay from a wagon



Israel W. Morris' Barn.

in five minutes. Four shoots, for passing hay and straw down to the basement, are formed like ladder work, or of four poles placed vertically, two and a half feet apart, and connected by "rounds," like those of a ladder, so that hay and straw are readily thrust into these shoots at any height.

The grounds of this fine old residence contain much that is interesting in the way of trees, shrubs and flowers. One of the most pleasing objects is the plantation of Rhododendron catawbiense, with azaleas, &c., among the wild natural shrubbery of a small ravine, where they grow luxuriantly, many of them six or seven feet high, with profuse clusters of flowers.

Farm of Isaac Garret, *Upper Darby.*—This is one of the best, if not the very best farm in the township. It contains 133 acres of excellent land. The crops are heavy, and weeds are not allowed to grow. The ox-eye daisy, so abundant all through this region, has been completely eradicated, and not a single plant could be seen. The mode practiced for its extirpation is to plant two hoed crops in succession, usually corn, both being well manured, to be followed by wheat, seeded to clover. Very few of the weeds are left, and these are then dug up. I observed on riding in to the premises two heavy fields of meadow on either side, which I estimated would yield three tons per acre—an amount which I afterwards learned was the average crop of the farm. As a proof of the fertility of the place, it is only necessary to state that forty cows and ten horses are kept upon it, beside which some hay is sold—two years ago, this surplus brought $600. The milk of the cows is sold at the farm for the Philadelphia market, at 3 cents per quart in summer and 4 cents in winter. About 240 three-horse loads of manure are manufactured annually on the place. A considerable portion of this is applied as a top-dressing to grass lands, the best time being before mid-autumn, so that the fresh grass may grow up through it, and cover it. The manure is composted by forming large heaps of alternating layers with the soil and turf of headlands. The fences being all straight post-and-rail, a strip of soil removed about two feet wide on each side of these fences takes away all that is carried or thrown up, and leaves the soil level at the boundaries of the fields. The shelter of the fence and the growth of grass prevents much freezing except in the coldest weather, and admits the removal of the turf at almost any season.

The barn is built in three stories like those already described. Different modes of securing cattle in their stalls have been fully tried, but stanchions are decidedly preferred, especially for the superior cleanliness which attends them, and the consequent improved comfort to the animals, as well as preventing the waste of hay, while they experience no disadvantage when compared with other modes. The accompanying figure (Fig. 1,) shows the mode of constructing these, and in answer to the many inquiries from the readers of the Country Gentleman, I give the dimensions of the different parts. The drain, into which the manure falls, is five feet two inches from the stanchions, is 18 inches wide, flat on the bottom so as to receive a square shovel for cleaning. In large establishments, the movable vertical bars might be all connected with one long horizontal rod, as has been sometimes successfully done, so as to loosen or secure fifty cows at a single motion of a lever—the animals all receiving their feed when returning to the stables, every one in its place.

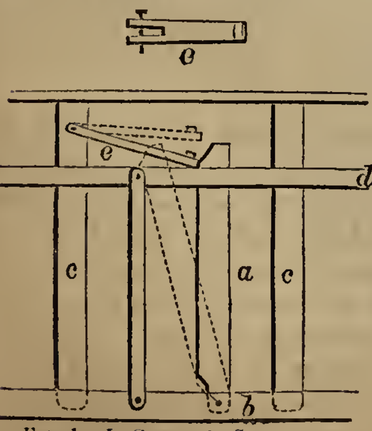


Fig. 1. I. Garret's Stanchions.

Fig. 1. A. space for neck, 7 in. wide. edges rounded—b. sill at bottom, 6 in. sq.—c. c, posts 3 ft. 2 in. apart from centres, 2½ by 5 inches, horizontal pieces, d, bolted on each side, leaving a space the width of posts, for the movable slats to play in. The latter are oak, 1¼ by 6 inches, rounded at edge—e. latch, about 2 feet by six inches. The dotted line represents it as raised, when the weight of the movable slat causes it to fall back and release the animal.

Edward Garrett's Farm adjoins the preceding one, and consists of 166 acres of beautiful table land, nearly or quite equal in fertility and management to Isaac Garrett's. The locality is a beautiful one, and commands an extensive view, embracing distant glimpses of the spires of Philadelphia, the great dome of the Pennsylvania Hospital, the Delaware river whitened with many passing vessels for a distance of many miles, and the faint blue ridges of New Jersey. The whole farm is neatly divided into regular fields with post and rail fence. The cost of constructing these is as follows, for each length of 11 feet:

Rails, 4 at 10 cents each, drawn from railroad,............	.40
Posts, dressed and finished for use,......	.25
Setting, 8 cents per length,..................................	.8
	73

Or a little over one dollar per rod. These fences last fifteen years or more, without any repairs whatever, when new posts are required; the rails, which are chestnut, lasting 30 or 40 years, or for two sets of posts. Some good stone walls are built on this farm. They are set in trenches 18 inches deep so as to be beyond the reach of frost, and are four feet high above ground. Their whole cost is a dollar and a half per rod, and being secure from tumbling by frost, and lasting an indefinite number of ages, are regarded as the cheapest barrier for the farmer. The three story barn is 56 by 66 feet in dimensions, and like the others I have described, receives the hay and unthreshed grain at the top, where it is pitched downwards; the granary being on the floor below and the stables in the basement. An endless-chain horse power on the upper floor does the threshing, and cuts the hay and straw for feed. Shoots carry down the hay straw and grain to the animals below. Stanchions are exclusively used for securing the cattle, and are preferred to any other fastenings. They are made similar to those of Isaac Garrett, but the details of construction are somewhat different. I give a figure, that the readers of this paper may judge and select for themselves such parts as they like best. The top piece has mortises for receiving the stanchions, and requires more labor to make than the other which is merely made of two horizontal boards nailed to the fixed stanchions, the movable ones playing loosely between these boards. The manger is about 2½ feet wide at top and 1½ at bottom; and for cattle of the size here raised 5 feet 2 inches is the best distance between the manger and manure gutter. The animals never waste any hay under their feet where these stanch-

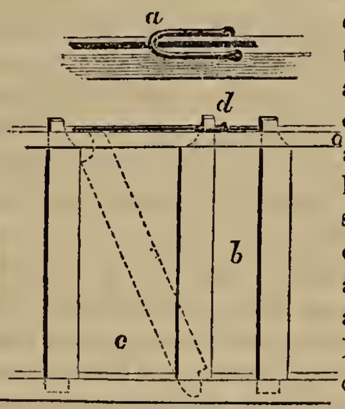


Fig. 2. E. Garret's Stanchions.

Fig. 2. Horizontal top piece, a, 5 by 3 inches—mortise in it 1½ in. wide, for movable slat to play in—the latter 8 by 1½ in. rounded on edge; fixed vertical piece, same size. Space for neck, b. 7 inches; wider space c, 15 inches, which may be partly covered if necessary by a vertical piece nailed on, as in fig. 1. The movable piece d. is secured to its place by a loop of iron resembling a clevis.

ions are used, but always waste largely when secured by chains or straps. A double acting water-ram supplies a constant stream of water from a large spring one-third of a mile distant, and furnishes the dwelling and all the animals with an abundant supply.

About 50 cows are kept on this farm, chiefly for supplying the city with milk. They make about 250 two-ton loads of manure. It is not usually composted; but an abundance of straw litter being used, all is wheeled out as it is formed, and deposited daily in a large square pile. Here it ferments moderately, and not so rapidly as when forked over, and is thus reduced to precisely the right condition for use. The rotation adopted is, 1. Corn with manure; 2. Oats; 3. Wheat, seeded to timothy and clover. As oats is an exhausting crop, better wheat is generally obtained by sowing after corn. Sheep would prove profitable in raising for the butcher, were it not for their destruction by the dogs. In fact, I did not see fifty sheep during all my rides in Delaware county. It seems greatly to be regretted that a most important branch of profitable and enriching husbandry should thus be cut off and excluded because dog owners persist in keeping such nuisances. Young turkeys are very successfully raised by feeding them, during the first week, on *hard boiled eggs*. Poultry raisers have found the successful rearing of the young animals the most difficult part of turkey management; but by thus using eggs for their food, very few are ever lost.

These two farms, now occupied by Isaac and Edward Garrett, amounting together to 300 acres, were formerly, when under a different ownership, unable to support 30 head of cattle—now they sustain about 100. Edward Garrett regards good farming land in this neighborhood as worth at least $200 per acre, as a profitable investment for the products afforded, and has offered more than this price for an adjoining farm. His own farm yields between four and five thousand dollars in its aggregate products per annum —a large share being in the sale of milk, but nearly as much could be obtained in other ways. He remarked to me that any person who could not by moderate labor and attention furnish a comfortable support for his family, and lay up $1,000 a year besides, from such a farm as this, "scarcely deserved to have a farm." It furnishes another proof, that high farming, properly managed, even if the land is high priced, gives the best profits.

I should have added that the apparently all-pervading ox-eye daisy has been completely eradicated from the whole farm, and not a single specimen was to be seen. After being once thoroughly cleared out, it does not easily return, high fertility and good seeding tending to remove as well as exclude it. This remark applies, with still more force, to the garlic, which has disappeared from these fields.

RESIDENCE OF CHARLES YARNALL.—This fine place has been occupied only about four years, and was selected as a comfortable rural home for the owner who has retired from a successful city business. It consists of some 40 acres—about one-half of which rises with a handsome slope from the entrance to the mansion, a distance of forty rods. Scattered natural trees give a fine appearance to this lawn. On one side and towards the rear, the ground slopes off at first gradually and gracefully, and afterwards more abruptly, to a thick wild wood, which is traversed by cut walks, and which afford all the seclusion to be found far away from city neighborhood. A fine stream, 10 or 15 feet wide, passes through this wooded valley, and seats are occasionally placed on its banks of moss-grown, fern-covered rocks, and its waters are broken by gentle ripples or flashing cascades. All these are within five minutes' walk of the dwelling. The out-buildings are unobtrusively placed in another portion of this wooded valley. The kitchen garden is near them, and being warm and low, and sheltered from winds on every side, vegetables and fruit ripen early. Strawberries mature a week or two sooner than on open ground. A fertile soil and good cultivation give very fine specimens. I measured some berries of the Triomphe de Gand, not mature, and therefore not fully grown, that were a little over two inches longest diameter. As in most other places in the neighborhood, this variety bears moderately. Dwarf pears showed by their vigor and luxuriance of growth, the good cultivation they received; but a decided superiority was observed in those which received *broadcast* cultivation, over such as stood in a cultivated strip in the grass.

I made a brief call at the residence of WM. D. COPE of Merion, who has occupied it only six months, and is consequently just beginning improvement. Before removing to the premises, he erected a fine stone dwelling and barn, both built in the best and most substantial manner, and roofed with slate. The stone used consisted of broken and blasted boulders found on the place, the removal of which, for this purpose, left fine smooth fields. The kitchen garden was surrounded by an arbor vitæ hedge, in good growing condition, 4 feet high, and planted only last year. The plants were several feet high when removed, which was very successfully done, not a single failure being seen. A natural pile of huge boulders, near the house, had been left for rock-work, which served the purpose admirably, and creepers and ferns had been planted for covering them. It is only such natural specimens of rock that are entirely successful, as it is difficult, if not impossible to remove and collect those which are large enough to look well. (I remember being struck some years ago with the contrast between natural and artificial rockwork, on a celebrated place near Boston, where a formal artificial pile of comparatively small stone had been made in the garden, looking somewhat like a pile of eggs, while a few rods distant across the boundary, and in a small natural pine grove, were huge masses of granite, partly hid in earth, and covered with moss, and wreathed with old tree roots, presenting a beautiful and picturesque appearance.) There were several fine old pear trees near the house, one of which, a tree of the Early Rousselet, is over 40 feet high, and measured 6 feet 9 inches in diameter several feet above the ground. Although supposed to be over 100 years old, it was thrifty and vigorous, and bears abundant annual crops. This variety generally succeeds finely in this neighborhood.

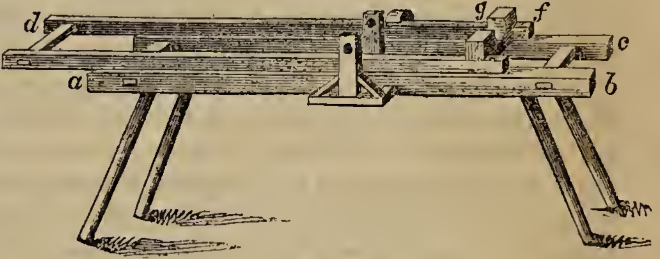
On our way from Wm. D. Cope's, to visit the old Haverford meeting-house, we passed the large boulder, some ten feet in diameter, and presenting a flat table top about four feet above ground, on which William Penn, when governor, stopped to take his lunch. It was, I think, when passing this road, that an incident occurred showing the kind heart and unostentatious character of this great man. Travelling to meeting on horseback, he overtook a little barefooted girl whose appearance interested him. Learning that she also was on her way to meeting, he took her up on his horse behind him, and thus governor and barefooted girl rode on together. How many of our present governors would do the same? The Haverford meeting-house, already alluded to, is the oldest in the State, being built in the time of Penn. The mode of warming it is a curiosty, hot-water pipes, and Chilson's furnaces not being then in use. An oven was built in the stone wall on each side of the house, the mouth of the oven opening outside, and the smoke also passing out a few feet above. The fires were thus built from the outside, the ovens projecting within and warming the apartment. These had been removed, but the stone hood over their mouths and the short chimneys above remained. A white oak tree, with broad spreading top, and trunk five feet in diameter, stands in front of this old house.

Fine Growth of Trees.—At the residence of my kind friend Samuel Rhoads of West Philadelphia, (a fine old place occupying 50 acres, a few miles west of the Schuylkill,) are some good specimens of the rapid growth of transplanted trees. Several beautiful Norway spruces, which have been planted 23 years, have trunks now measuring two feet in diameter at a height of three feet; the lower branches form a circle of 35 feet in diameter; and the trees themselves are about 50 feet high. A red cedar, planted in 1802, is now 40 feet high and 18 inches in diameter. A tree of the Early Rousselet pear, 60 years old, is 23 inches in diameter, 40 feet high, and affords abundant crops.

A Glance at Montgomery County Farming, Pa.—In spending a day at the residence of George Spencer of Moreland, Montgomery county, I rode through portions of this and some adjoining townships. Agriculture here is in a fine condition, although not so celebrated as in Chester county. There are no princely farms. In the township of Horsham, the largest is only 155 acres. Farms here are worth $100 per acre and upwards, and it is only those that are best managed that pay full interest in nett profits, although few estimate the amount of comfortable supplies furnished their families. G. Spencer, who has long been familiar with the agriculture of this region, gave the deliberate and very encouraging opinion that the aggregate products of the land had fully *doubled* within the last 25 years—which he attributes to the skillful saving and use of manure; to drawing manure from the city; and to plowing in green crops of clover. Hay and other farm products are drawn to Philadelphia, 12 or 15 miles, and manure brought back by the returning wagons. To economize the time of the driver, four-horse teams are employed, and on these excellent roads each horse will draw nearly one ton of manure. They pay $1.50 per horse for the manure in the city, and it costs about $2.50 per ton on the land, well repaying the outlay. The soil through this region is light, and the manure is chiefly applied to corn land in spring before plowing, but frequently to wheat. Guano, applied to wheat, at the rate of 200 lbs. per acre, usually pays well, although the first crop may not fully reimburse the expense, which is $6 per acre besides spreading. It is sown by a spreading machine, before the wheat, and is worked into the soil by the grain-drill in depositing the seed. The only objection to the extensive use of clover as a green crop is its promoting the spread of garlic. The most *enriching* rotation is, 1, corn with manure; 2, oats seeded with clover; 3, clover plowed in the second year, and wheat sown on the sod; 4, clover and timothy after the wheat for two or three years. Garlic is the only objection to this course, and the cleanest rotation is corn, oats, wheat, then clover. Spring plowing before seeding, favors the increase of garlic, and autumn plowing tends to lessen it; hence the importance of plowing the field for oats in autumn.

The average product of the land is 40 bushels of corn per acre, 50 bushels on the best farms; oats about the same; wheat 18 to 20, although 28 to 30 are sometimes obtained—and one and a half tons of hay. The fences are nearly all,—probably at least nine-tenths,—good post and rail. The cost is about $1 a rod. Occasionally, old worm-fence is to be seen. Chestnut is mostly used for rails and posts. The best time to cut it, all things being considered, is in the month of February. As soon as the bark can be stripped from the logs in springs, they are split and the rails at once placed where they will season rapidly, which adds much to their durability, and renders them nearly as lasting as if cut in summer. Without this care, they decay much sooner. The object of cutting during the latter part of winter, is to induce the stumps to send up suckers for a second growth, which they do profusely, and which would not take place if the cutting were done in summer. Lime is generally used as a fertilizer at the rate of about 40 bushels per acre—a larger quantity is attended with no increased advantages. The cost is about 7 cents per bushel.

As the mode of constructing post and rail fence in this part of Pennsylvania is likely to be adopted in other portions of the country as timber becomes scarce, I have taken some pains to ascertain the best mode of preparing the posts, adapted to hand labor, and which may be done on rainy or stormy days, or in winter. The one here figured (fig. 1) consists of a frame *a b c* made of scantling, and placed horizontally on four stout legs. This is the support of the machine. On this is another frame *d e f*, which may slide backwards and forwards, and which receives the post to be bored. The post is wedged into the space *g*, and the auger being inserted into the two holes shown at the middle of the frame, it is driven through the post by turning the handle or winch. Marks are made on the sliding frame, to show the precise place to bring the posts, so that all may be bored alike—the auger remaining fixed. Fig. 2 shows the bed piece for receiving the post on a larger scale. Fig. 3 exhibits the contrivance for securing the post firmly to its position for hewing or dressing with the axe—a cavity being made in a log for receiving it, when the iron point driven in secures it.



Post-Boring Machine.—Fig. 1.

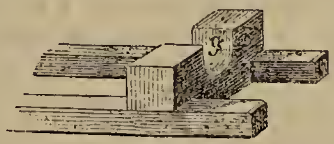


Fig. 2.

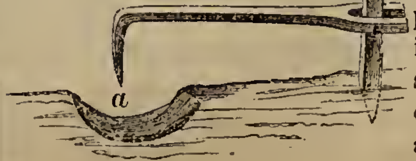


Fig. 3.

An important improvement might probably be made in the boring frame by placing it in a slightly inclined position (as by shortening the legs on one side,) so that when a fly-wheel is attached to the auger, its weight would cause it to descend into the post. This fly-wheel might be a common grindstone, in the absence of anything better, attached to the auger.

In constructing the fence as many readers know, the posts are set two and a quarter to two and a half feet deep, and each length of rails inserted before the next post is fixed in its position. The rails cannot then be displaced, so long as the fence stands. The rails being cut wedge-form at the ends, pass each other in the holes, and if coated with gas-tar where entering, the fence would be rendered more durable.

In my notices of Cayuga County Farming last summer, I furnished some description of this mode of making fence, where timber is somewhat cheaper, and where it costs about 80 cents per rod. Next to stone wall, it is probably the cheapest straight fence for ordinary farm subdivisions. J. J. T.

LETTER FROM COL. JOHNSON.

Mr. Webb's Sale of South Downs—Agriculture in the Eastern Counties—Crops Behind—Welcome at the Exhibition—Success of American Exhibitors—A Grand Show.

International Exhibition, 1862,
U. S. Department, July 21st.

Messrs. L. Tucker & Son—On our arrival here on Tuesday last, I found a letter from Mr. Strafford, advising me of the closing sale of Jonas Webb's South-Down flock to be held the next morning (Wednesday.) Mr. Cornell and myself, and Mr. Dagwell of Utica, took an early train and reached Babraham in time, and were most cordially greeted by Mr. Webb. On passing through the eastern counties we had a glimpse of the state of agriculture, which upon the whole is quite encouraging—though the season is two weeks later than usual, and the state of the weather ever since our arrival at Liverpool has been unfavorable for the grass fields. I can see a very great advance in the agriculture of this country since 1851. There was a good attendance at the sale. The sheep were in fine condition, and the rams, 148 in number, were the evenest lot of sheep I have ever seen. The sale, under the direction of Mr. Carter Jonas and Mr. Strafford, commenced at 12 o'clock, and proceeded with an order and regularity, which was much to be admired. The sales were rapid, and everything seemed to be satisfactory. Buyers from the Continent were present in large numbers, and bought, I think, largely, and the sale was closed about 6 o'clock, when the *last* of the Babraham flock passed out of Mr. Webb's hands and the South-Downs are no more to be a specialty here. Mr. Webb, at the close of the sale was called out and made some very appropriate remarks, and thus closed the great sale. The amount of the sale was about $28,500.*

On Thursday we visited the exhibition, and I was most cordially welcomed by the Commissioners, and was glad to find that Mr. J. E. Holmes, our Acting Commissioner, had performed wonders in the arrangement and disposition of our articles. We had four jurors, most efficient men, and I believe all of our articles received attention, and as the jurors close their labors to-day, the awards will be known early next week, and we are assured that our contributions will receive a fair share of medals.

Every possible attention has been given to our department by the Royal Commissioners, and Prof. Owens, who has charge of the foreign department, has laid us under obligations that we can never fully repay, by his constant endeavors to provide a proper place for our articles. And when it is recollected that we did not have our goods here until long after the time for reception had expired, it may be seen how much we are indebted to him for favors received.

I called on the Secretary Royal Agricultural Society, Mr. Dare, and every attention was given to us, and we were most cordially desired to be present next week at the opening of the Battersea show. It promises to be *the* show of the society, and I will furnish you as early as practicable an account of the exhibition.

The exhibition in the building exceeds far all my expectations—progress everywhere is most manifest, and the world has moved in every direction since 1851—most, I think, in the machinery, implement and manufacturing departments, though a great advance in the art division. I hope to be able to furnish you with some description of the implement and machinery department soon. B. P. J.

[For the Country Gentleman and Cultivator.]

HOW I HIVED A SWARM OF BEES.

A fine large swarm of bees lately took a fancy to alight on the top of a locust tree, about 28 feet from the ground! The tall slender branch would support neither man nor boy. To saw the limb off would precipitate it to the ground, kill many bees, and scatter the rest. The way I did it may possibly be of some use to novices on future occasions. A man could not, without incuring danger of breaking down, approach nearer than 15 feet. I first tied a handsaw firmly to the end of a long pole. I then tied a small stone to a cord, and with another long pole pushed this stone over the small branch on which the bees had fastened, so that it might draw the end of the cord over the branch, and down to the ground. Then taking out the stone, the other end of the cord was passed through the loop which held the stone, and drawing on the cord the loop was drawn up and firmly held the branch. Then with the pole the cord was lifted and placed over a fork just above the bees, made by sawing off a small shoot on the tree. I was now ready for action. While an assistant held the end of the cord on the ground, the limb holding the bees was carefully sawed off—the cord holding it from falling. It was carefully lowered down to the ground, carefully carried to the table on which the empty hive had been set, and the bees shaken off in the usual way. About as much time was required for the whole operation as for me to tell the story.

A still better way to hive bees, and easier, is to provide beforehand two or three hiving boxes, on the end of poles of different lengths, each to be used as the bees light higher or lower. They may be simple board boxes, holding a peck or more, open on one side, and fastened to the end of the pole. When the bees swarm, hold this box among them, and they will most likely alight in it; but if they do not, and begin to settle in a tree, strike the open side of the box a few times against the point where the bees are beginning to settle, and they will be either jarred into it, or take possession as a matter of choice. As soon as they begin to settle, make a crow-bar hole in the ground, and set the pole in, or lean it against the tree, if more convenient. When settled, remove the pole, box and bees, and jostle the bees in front of the empty prepared hive. If, instead of setting the hive as usual on a table, a shelf be thrust under the one they are intended to occupy, they may be jarred off on this shelf, and will immediately take possession, and no removing afterwards be required.

Experienced bee-keepers who make artificial swarms, will, of course, need no instruction of this kind, but to others these hints may be useful. X. X.

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☞ Will officers and members of County and other Local Agricultural Societies, kindly see that we are apprised of the time and place of holding their Exhibitions the present season?

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* Of the rams there were 148, and of ewes 289; the former realizing 3511*l.* 2*s.*, and the latter 2209*l.* 6*s.*, the total amount for both being thus 5720*l.* 8*s.* There was a very large attendance on the occasion, more especially of the breeders of Sussex, the original home of the South-Down. Many of the animals were bought for different parts of the Continent of Europe. The portion sold last year sold for £10,926 10*s.* so that the whole flock has realized 16,646*l.*—English paper.

PLOWS FOR CUTTING DRAINS.

I wish to obtain some information with regard to *drain plows or ditch diggers*, as I am about to tile drain a large and level piece of clay land, on which I would like to employ as little hand labor as possible. Do you know from your own knowledge, or from that of some reliable person, any such implement which can be depended on as of practical utility in putting down, or assisting to put down drains, in stiff clay land, where there are no stones or other obstructions.

Pratt's Ditch Digger, (I think this is the name,) I have somewhere seen favorably mentioned. Do you know anything of its capabilities? If you can furnish me with information on this subject, I will be happy to remunerate you for any trouble or inconvenience you may subject yourself to in procuring it. If you recommend any such implement, please inform me of its price, and the name of some respectable firm from whom I might order it?

L'Original, Canada West. AGRICOLA.

Our correspondent will find an article on this subject, with several engravings, giving the results of several years experience with ditching plows, on pages, 296, 7, and 8, of second volume of Rural Affairs. As we have frequent inquiries on this subject, we give a part of the article:

In most localities where tile drains are made, two-thirds of the labor of cutting is loosening the earth with the pick, before shovelling it out. By means of the ditching plow, this laborious process is performed by horses. One span, with a good plow made for this purpose, will loosen the subsoil fast enough for eight or ten men shovelling, and cutting about 100 rods 3 feet deep in a day; or an hour or two each day with the plow will keep two men at work. If the subsoil is very hard, this work should be done early in summer. The implement is drawn by two horses, attached to the ends of a main whipple-tree about seven feet long, one walking on each side of the ditch. From one to three times passing, will loosen the subsoil five to eight inches, which is then thrown out by narrow shovels, on both sides, so that it may be easily returned after the tile is laid, by means of a common plow drawn as before by the long whipple-tree.

The adjustable ditching plow, fig. 1, admits of so great a change in the height of the beam and handles, that it may be run down in the bottom of a ditch to a depth of four feet. It is perhaps the best implement of the kind for all purposes and soils. The movable portion of the beam is attached to the fixed beam by a stout loop and staple, and rises on a cast iron arc which passes through it, as shown by the dotted lines. The handles rise on a stiff *wooden* arc, (as the dotted lines exhibit,) a piece of thick plank shown in the small figure on the right, being placed between the handles and fastened to them, to render them more firm and steady. The iron work, although light, is braced so as to impart great strength and security. The point is screwed on separately, and is nearly the only part that wears by use.

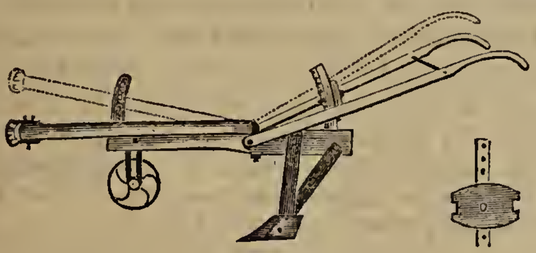

Fig. 1.

A modification of this plow rendering it simpler, and capable of running down to a depth of three feet, is shown in fig. 2. Instead of arcs, small uncurved stems are used for raising and depressing the beams and handles. A slot is made in the movable beam, and three holes for different heights, in the handles. The rest is similar to fig. 1.

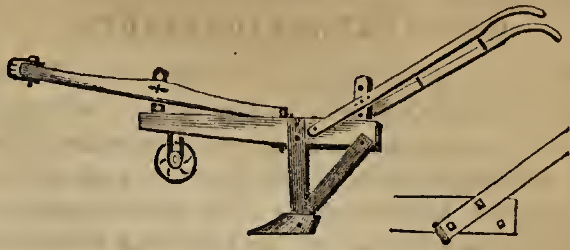

Fig. 2.

[Note.—*Pratts' Ditching Machine*, described in a former number of the Register, although working well when new and in perfect order, has been found on account of its great weight and complex form, and consequent liability to derangement and breakage, to be of little or no practical value for general purposes.]

These adjustible ditchers are made by M. Alden, Auburn, N. Y.; W. McFarland, Union Springs, N. Y., and by others. They cost $8 to $12 according to modification. When skillfully used, they save much labor, except when the land is extremely stony. Used bunglingly, they are no better than a handy hand-ditcher. In the soil which our correspondent describes, we think they would effect a great saving of labor.

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[For the Country Gentleman and Cultivator.]

Large Yield of Milk and Butter.

Eds. Co. Gent.—I have just noticed an article of "Agricola," in Co. Gent., page 399, reviewing statements of yields—from individual cows and dairies—of milk and butter, as found in former vols. of Co. Gent. This brought to mind a neglected slip of paper stored in my vest pocket, giving an account of the "doings" of a milker belonging to Mr. James Q. Lotspeich, an old and reliable citizen of this place, which was given me by Mr. L. some days since, to forward for publication to some agricultural journal.

But to Mr. L.'s statement, which, though not so full as desired, is reliable so far as stated. He advises me that hereafter he will observe more carefully and for a longer period, the future results.

Cow, 9 years old—half-blood Short-Horn with native. In first week of May, from grass alone, during first *four and a half days—nine milkings*—from cream of milk of morning and night, was churned 9 1-16th lbs. of butter.

In first week of June—*fourteen milkings*—280 pounds of milk.

The first statement of yield of butter is larger, during same length of time, than any observations in the letter of your correspondent before me. In *second* column is given results of Ayrshire breed, for six days milking—8 pounds of butter. And in *third* column, of a grade Short-Horn, from 7 days, 14 milkings, is given $15\frac{1}{4}$ pounds of butter.

Mr. L.'s cow is in the "front rank" of these statements. Let us hear from other sections. I consider these statements interesting and valuable, as tending to show what breeds are the best milkers and butter producers in all sections. "W." *Hickory Grove, London, O., June* 30.

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☞ We see by our exchanges that strenuous efforts are being made in several counties to enforce the law passed by our legislature last winter, to prevent cattle from running in the highways. Though some ill-feeling may be excited by the enforcement of the law at first, we hope a united and strong effort will be made throughout the State to abate a nuisance which has been too long a disgrace to the State.

CULTIVATING ORCHARDS.

The editor of the Gardener's Monthly insists that it is better for orchards to grow up to grass than to be kept in a state of cultivation, and a doubtful exception is made only in favor of the dwarf pear, and of "weak and stunted trees," in some instances. Our own experience, as our readers are well aware, has led us to a different conclusion, at least so far as the eastern and middle States of the Union are concerned. There may be localities in the rich and warm west, where a more moderate growth may be advantageous, and this exception holds more particularly in relation to the standard pear.

Many will agree with us in saying that young or newly set orchards will be greatly injured or nearly destroyed by allowing grass to grow among the trees. This is especially the case with the peach tree. Every person of observation may have seen hundreds of dead trees, which have been lost solely by being set in meadows. It would be wiser to plant corn in a meadow, without plowing or cultivation, for the total loss which would result would be only a loss of a peck of seed per acre, instead of a hundred young nursery trees. We could go on and enumerate pages of instances where young trees have perished by hundreds from a want of culture, and also where whole orchards have sprung up with a good healthy vigor, with scarcely a missing one, when subject to decent cultivation. Peach and apple trees, set in grass or sowed grain, *if they live*, will grow about two or three inches yearly; if cultivated, they will grow about two feet. At the former rate of growth, ten years or more would be required for them to attain the size and value they would acquire in two or three, under good culture. We have never known a single instance, where an intelligent cultivator has tried both modes side by side, without adopting the opinion here expressed.

Yet, if there are localities at Germantown or elsewhere, where the soil is so fertile that young or old trees standing in grass, will make shoots annually two feet or more in length, cultivation would obviously be unnecessary. We have not met with such soils except at the west, and rarely there.

The difference between a cultivated and a grass surface is perhaps less obvious with a full grown apple orchard than with most other trees. If treated as the Gardener's Monthly recommends in the same article, namely, with annual top-dressings of manure, they would fare better than nine-tenths of the orchards throughout the country. The editor of that journal, however, says "he cannot remember an instance, where fruit trees in a well-kept and cultivated garden, remained perfectly healthy for a long period, or ever produced but a moderate crop of fruit." His experience has certainly not been fortunate; for many instances might be cited to the contrary. The most productive and healthy old apple trees which we know, are those which stand in old, fertile, constantly cultivated gardens. One of these trees has borne forty bushels as a single crop; and none of them have the stunted, mossy appearance nor the dead shoots and branches, observed in some neighboring orchards in grass. There is, however, some ground for the observation occasionally made, that neglected trees are hardier—the fact is, none but the very hardiest individuals can endure such treatment; all the rest of weaker endurance have long since perished, and these only remain.

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If virtue is its own reward, there will be persons who will have little enough.

Management of the Bare Stems of Trees and Watering.

It is familiar to horticulturists and physiologists, that s long as trees continue in a state of vigorous growth, they keep cool or maintain a low temperature in every part. An apple, while growing on the tree, or remaining attached to the branch after maturity, will not become heated, with the severest rays of summer pouring upon it. When it is severed and falls to the ground, it soon becomes hot in the sun's rays. It is so with the stem or trunk of a tree. If there is a free growth, the bark is rarely injured by heat; if the tree has been checked or rendered nearly dormant by previous transplanting, or by neglect in cultivation, the danger from this cause is greatly increased. We frequently see half dormant trees with burnt and peeling bark on the south side, after a hot summer. The remedy for this evil is good cultivation in the first place, and if this is insufficient, shading the stems by tying on a loose covering of straw, and if but few leaves have come out, keeping this straw wet by occasional applications of water. Transplanted trees sometimes remain green many weeks without expanding their leaves, and they are often injured in this condition by soaking the roots, and leaving the stem to dry. Roots need a copious supply of moisture only when they have plenty of leaves to throw it off and pump it up from below.

Many newly set trees are killed by injudicious watering; the water is poured on the surface, and first wets and then hardens it, and renders it worse than before.* If any watering is given, the soil should be first taken off the roots, that it may passs freely among them, and then the mellow earth is to be replaced. But even this must afford but an irregular supply, and cannot be so sood as the constant and uniform supply furnished by a well cultivated mellow soil, or by a well mulched surface. In conclusion, our readers who may have planted out *cherry trees* the past spring, may properly be reminded that there is nothing that will more certainly secure them from the midsummer death to which they are so liable in hot seasons, even after making two or three inches growth, as a thick heavy mulching of old straw, hay, or saw-dust, extending several feet about the tree; and in the more doubtful cases, it may be best to straw the whole stem, and keep this daily watered for a time. At the same time surface watering for such trees is positively detrimental; in proof of which we may mention a single instance out of many. A neighbor set out 50 fine cherry trees—he watered 25 and left 25 unwatered. Of the former, one-half died; of the latter but two out of the whole. A good mulch would probably have saved all.

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Root-Grafting the Pear.—A correspondent of the *Gardener's Monthly* says that the result of his own experience combined with observation of the experiments of others in grafting the pear, conducted in the most careful manner, leads to the belief that root-grafting the pear is a failure. He remarks, "of fifty thousand that I have known to be carefully grafted, not 1,000 have lived. I am sure that thousands of pear stocks and much money are yearly wasted by beginners." Our own experiments have not been quite so extensive nor quite so unsuccessful, but we have long since given up the practice. Yet it has succeeded well with some, who have used *whole roots* of the freshest, strongest and most fibrous rooted stocks, set in the best pear soil.

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* For this reason, autumn transplanting is often found more unsuccessful than when done in spring,—the rains of autumn and winter converting the surface to mud, which afterwards bakes as it dries, and proves detrimental to the growth of the tree. If the soil is rendered mellow as it always should be, this unfavorable result of autumn removal can never take place.

The Crops at Home and Abroad.

The farther development of the Season in Europe is unfavorable for a full crop. As illustrating the present prospect, we condense the following from the Scottish Farmer of June 25th:—

> The prospect of an early harvest has now gone from us, as in Scotland we are at least a week later than usual, with but little prospect of forcing weather soon, to make up for the delay. In England, reports from the wheat-growing counties speak very poorly of both wheat and barley, which is stated to have suffered more during the last eight days than it has done before, and is said not only to be sickly-looking, but to have gone off very much, especially on the higher and more exposed lands. Wheat comes very slowly and irregularly into ear, and the blooming season being now at hand, a change to warmth and sunshine is anxiously looked for. It now appears as if we could scarcely have a general wheat harvest until September; and if so, it carries us into an additional consumption of at least two or three weeks, or perhaps one month's reliance on foreign corn, more than was calculated on, and will to that extent have a certain tendency to enhance prices. In consequence of the uncertain state of the weather, prices have again gone up 1s. to 2s. per qr. on wheat at all the leading markets in England and Scotland, with an evident tendency to a further advance should the season continue unfavorable. * * * From France complaints of the weather are equally strong, and the north is said to have suffered considerably from wind and wet, and to a greater extent than the southern departments. There is a general impression that under any circumstances the wheat crop can now scarcely be up to an average, and even that is dependent on the weather hereafter proving propitious. * * * From the Baltic provinces accounts of the season are also unfavorable, far too much wet having fallen; but, as the and there can stand a good deal of rain, it is hoped that the njury done will not be extensive.

In this country, on the contrary, we are inclined to think that, *as a whole*, *during several weeks past*, *the prospects of a good yield have been brightening perceptibly from day to day.*

In visiting Rochester last week we met incidentally T. S. Faxton, Esq., of Utica, who has very lately returned from an extended tour in the West. He represents the prospect of Spring Wheat as now promising to *yield quite as large a crop* as in 1861, for, if it may be lighter to some degree upon the ground, he thought the surface sown sufficiently extensive fully to counterbalance this deficiency.

As to crop prospects in the great wheat growing region of which Rochester is the centre, we derived some interesting statements in conversation with B. M. Baker, Esq., the energetic and practical President of the Monroe County Agricultural Society. Mr. Baker's opportunities of forming an opinion have been unusually good; and he thinks that Wheat prospects through the Genesee Valley *have never been as favorable in any year since the midge first made its appearance there.* Moreover he not only thinks the crop likely to be a full one, but says that a much larger breadth than usual is sown to wheat in Western New-York; and that the aggregate crop cannot but exceed that of 1861, which was regarded as the largest that had been harvested for several years. Mr. Baker thought Oats likely to be a light crop, and the hay crop also light, especially upon old meadows. Cutting is beginning just about this time. Corn can hardly be a full crop, unless favored by a warm autumn and late frosts; but it looks more forward, we noticed from the railway, within twenty or thirty miles of Rochester, than in the eastern part of the State, and Mr. Baker thought it also better there than in Canada. The Barley promises to be very fair, and Potatoes are good. Peas are looking well, and are sown in larger area than for many years past. Of Beans the surface sown is also very great; a heavy product may be expected, and if anything like present prices are obtained, this at least will be a profitable crop. The demands of the army are likely to be large enough alone to create an immense consumption.

It is pleasant thus to find that our Agriculture again bids fair, not only to supply all the wants of our own people, but also to make up for probable deficiencies in the production of other countries. The abundant crops of the past two years have been all that has sustained us during the present enormous struggle—completely preventing an entire national bankruptcy, and, under Providence, overruling the designs of other nations, and placing them in a position of dependency upon us, instead of in that of dictation or armed antagonism. It is with lighter hearts, then, and higher hopes, that we may turn from the delays and uncertain fortunes of War, to the favorable prospects of the coming Harvest; and while we patiently await the triumphant success which, as we fully believe, will eventually crown our arms, we may perhaps discover, or think that we discover, upon our Farms, cheering indications that Nature herself is siding with us, not less in what she is so abundantly promising here, than in what she seems to be withholding abroad.

Central Park Conservatory

The last number of the Horticulturist has an unusual amount of valuable and interesting matter. We condense some of it, and add occasional remarks.

A handsome wood engraving, by J. W. Orr, printed in colors, forms the frontispiece. It presents a fine design, and somewhat resembles in external appearance, the conservatory at Kew. It is to be completed at the end of next year. The proprietors, Parsons & Co. of Flushing, relieve the city of the expense of erecting and keeping it filled and in order. They are to pay a rent for the ground, and have the privilege of selling cut flowers and plants in pots. They are to keep it up in such a manner that visitors at the park may see at all times at the conservatory, all that is new, rare, or beautiful, to be found in the country, in the floral line. It is to be the index as well as educator of the public taste in these matters. The apartment for Camelias will be 40 by 60 feet; for ferns and orchids, 40 by 60, besides room for roses, cut flowers, &c. All these are to be on the lower story. The interior of the upper conservatory is to be laid out either in the Italian style, with broad walks, or in the natural style with winding paths. Exotic vines are to festoon the rafters and columns, and exotic plants, as palms and bananas, are to stand in carpets of Lycopedium, with well arranged masses of flowers, constantly supplied from hot-houses. The upper room of all is to be a winter garden, and singing birds add to the interest of the scene. The Fernery, with rock work, and trickling streams of water, will not be omitted. On pleasant days there are now 8 to 10,000 visitors to the Park, and it is thought that as it increases in attractiveness, 10,000 daily will visit the conservatory. It is not expected that Parsons & Co. will be able to supply all the plants needed, but will furnish them on commission from many other establishments; and visitors will be supplied with lithographs of plants, plans, designs for gardens, window-conservatories, green-houses, &c., and public taste cultivated and increased. On the whole, this is an excellent design, and we hope it will be carried out, with improvements.

Result of the Trial of Mowing Machines at Fishkill Village, N. Y.

Name of Machine.	No. of Machine.	Length of swath Cut.	Width of Swath	Time of Cutting.	Draft in Pounds.	Travel of Horses per Minute.	Square Feet Cut per Minute.	Mechanical horse-power expended while cutting.	Mechanical horse-power expended per Acre.	Mechanical horse-power expended for 10 Hours.	Time Required to cut an Acre.	Acres per Day of 10 Hours.		
		Feet.	Ft. In.	M. S.		Feet.					Min Sec	Acres.	Rods.	Feet.
Wood's, Hoosic Falls, N. Y.	1	330	4	1 40	218	198	792	1 31	71 9	781	55	10	145	123
Buckeye, Poughkeepsie, ...	2	330	4 1½	1 23	206	238 5	984	1 43	63 2	893	44 16	13	87	255
Union, Worcester, Mass.,..	3	330	4	1 25	247	232 9	931 7	1 74	81 5	1046	46 38	12	133	129
Gleaner, Poughkeepsie,....	4	330	4 6	1 7	283	295 5	1329 8	2 53	83	1520	32 45	18	50	216
Van Anden, Poughkeepsie,.	5	330	4 5	1 15	295	264	1166	2 36	88 1	1416	37 21	16	9	189
Ohio, Auburn, N. Y., ...	6	330	4	1 15	245	264	1056	1 96	80 8	1176	41 15	14	87	74
Monitor, Hull's, Po'keepsie,	7	330	4 8	1 18	247	250 8	1184	1 90	69 9	1140	36 46	16	50	266
Union, Gales', Po'keepsie,..	8	330	4 6	1 27	245	227 5	1024	1 69	71 8	1013	42 32	14	17	14
Montor, Brooklyn,.........	9	330	4 6	1 50	225	180	810	1 23	63 5	736	54 16	11	25	33
Hubbard's, Troy, ...	10	330	4	1 50	193	180	720	1 05	63 6	631	60 30	9	110	12
Pine's, Troy, ...	11	330	4 6	1 30	193	220	990	1 28	56 3	768	44	13	101	222

[For the Country Gentleman and Cultivator.]

Trial of Mowing Machines at Fishkill.

A trial of mowing machines was held on Tuesday, June 17th, on the farm of Isaac E. Cotheal, Esq., at Fishkill Village, about six miles east of Fishkill Station, on Hudson River railroad, at which eleven manufacturers of as many different machines, were present—also a very large concourse of farmers from the surrounding country. Taken altogether, the scene presented the appearance of a public holiday in field and village, as it really was.

The trial commenced at 10 o'clock, A. M., by drawing and staking off lots of about one-fourth of an acre for each machine, when each in turn cut their allotted portion of the field under the inspection of a local committee of arrangements, as well as that of several hundred farmers, all of whom seemed determined to inspect the work done and the working of the several machines, to their own satisfaction, which they did most thoroughly. The grass was quite light in portions of the field, and all was soft and tender; a portion had been overflowed by recent freshets, and on the whole it was such a test as tried well the machines. Each machine was required to do clean and good work, and which, without exception, was satisfactorily done, in that respect, to all present, there being little difference between the stubble left by all of the machines, which difference seemed to be a little unevenness or irregularity in height of stubble, caused by the cutting works of some two or three machines vibrating up and down from the unevenness of the ground, and their stiff construction, while those which were hinged or jointed, so as to follow the surface of the ground, were free from such objections.

The machines were also thoroughly tested by driving fast and slow, and stopping and starting in the grass, and none failed to perform satisfactorily. Indeed, among all the numerous trials which have come under my observation this one embraced more meritorious and less objectionable machines than on any previous occasion.

These trials, to be understood and useful to those not present, should be managed and reported with the greatest care, so as to give a correct idea of the general character of the construction of each machine, as well as the capacity and price of the same, together with the dynamometrical results, and the last especially in an intelligible manner, which has never been attempted but once or twice to our recollection—once by the New-York State Agricultural Society, at Geneva, 1852, and the United States Agricultural Society, at Syracuse, in 1857. The committee of arrangements at this trial deemed it inexpedient to make any formal report or awards as to superiority, as it would chiefly depend upon the differences of mechanical construction, embracing simplicity, durability, cost, portability, convenience of operation and repairs, and as a majority of them were so nearly balanced in their claims on these points of consideration, it must necessarily involve much labor and time for trials, and more than was then practicable to enable them to do justice to either themselves, the manufacturers or the public, and therefore they left only the dynamometer committee to make a report upon the drafts of the several machines, a copy of which is given below.

In order to appreciate the use or the results of a Dynamometer trial, it is *not sufficient* to report the one column of actual drafts indicated, as is usually done—indeed that would lead astray more than without its use altogether, especially where a spring instrument is used for the purpose, as was the case in this trial. The truthfulness of this will appear when it is considered that the draft indicated by the instrument is but the results of the attending circumstances, combining the working qualities of the mechanism of the machine, the capacity or width of the same, together with the speed of the machine while cutting. In short, it is the result of the two things—first the mechanical perfection and adaptation to the purpose, and secondly the amount of work done. If one machine is moved at a higher velocity than another, it necessarily does more work, and consequently requires more propelling force to keep it in motion, than the same width cut at the slower velocity. Again, a wider cutting machine will do more work than a narrow one, and require more force to keep it in motion; therefore, in reporting upon this portion of a trial, the causes and results are as absolutely requisite as the simple item of draft of the machine, to enable any understanding, or to make any comparison, and with that purpose the annexed table was made by the Dynamometer Committee, consisting of Horace L. Emery of the Albany Agricultural Works, and J. C. Harris, Esq., Cashier of the Mechanics' Bank, Poughkeepsie, N. Y.

For all trials to be mathematically correct, and to show their relative capacity and the force required, each machine should be drawn by one team, or with the same speed—which was not done at the above trial. A machine may move too slow to show its working capacity and draft—while if moved too fast the reverse is the result.

Nos. 1, 2, 3, 4, 5, 8 and 11, are forward cutting machines. Nos. 6, 7, 9 and 10, are back or rear cutting machines. Horace L. Emery.

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Progress of Steam Cultivation in England.—"A gentleman informs us that he saw, a few days ago, from a spot in the neighborhood of Sutton Maddock, in this county, no less than five steam cultivators at work on adjoining farms. Of these, three cultivators were Howard's of Bedford; one Smith's of Woolston, made by Howards; and one Robey's of Lincoln. About six miles away, a sixth steam cultivator (Howard's) was at work. These facts illustrate not only the rapid growth of steam culture, but equally the enterprise of the Salopian farmers."—*Staffordshire Advertiser.*

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If the devil was chained to a post, men would be no better than they are; if he couldn't come to them, they would go to him.

[For the Country Gentleman and Cultivator.]

PLEURO-PNEUMONIA EPIZOOTICA.

Messrs. Editors—Having observed in several of your latest numbers of the Country Gentleman, some statements and inquiries, respecting the above disease, which appears to be still *latent* in the United States, I have much pleasure in submitting the following account of the disease to your readers.

Pleuro-pneumonia in cattle, occurring in the epizootic form, although only known in the United States within the last two or three years,* is now and has been very prevalent in the old world for many years back. In Scotland, and more particularly amongst the dairy stock of its large towns, it has raged with a threatening virulence and fatality scarcely to be credited, except by those daily coming in contact with it. I may as well state at the commencement, that the following remarks and opinions have been gathered and formed, from practice among the dairy cows in the city of Edinboro, to which class of stock they must chiefly apply to, although I would not suppose that there would be any marked difference from the disease, as it occurrs amongst dairy and stock cattle in the rural districts.

Pleuro pneumonia may be defined to be a specific inflammatory affection of the lungs and serous membranes within the thoracic cavity. There are many other definitions varying only from each other in several points of minor importance, but to me, the above one which I have given, has always seemed to answer and meet our present knowledge of the disease—more so, when we consider how much of it is still involved in doubt and obscurity.

Symptoms.—This disease cannot at all times in its earlier stage, be recognized from other affections of the lungs of an inflammatory character, for even its own first appearances are not always marked by the same symptoms, more particularly the type of the accompanying fever. It has been divided into three distinct stages:

1st. The incubative stage.
2d. do. active inflammatory stage.
3d. do. hectic or exhaustive.

This partitioning off of the disease is a matter which however, must be clearly understood, for while I have no doubt but that the two latter stages are characterized by a distinct set of symptoms, during the progress of the disease, I at the same time have never been able, and am of opinion that we cannot detect the exact time when the one stage ends and the other commences. They seem to run into each other without producing any distinct line of demarcation, the symptoms of each often being mixed up in the same case at one and the same time. As for the first or incubative stage, which signifies the period of time elapsing betwixt the first contraction of the disease and its development into the second stage, it is my opinion that it can scarcely ever be recognized—(of course when the active symptoms appear, we may be sure that this stage has preceded them.) We may from many circumstances have our suspicions aroused, that some one or more among a lot is affected, but as far as I am aware there are no sure symptoms which would enable us to come to a direct conclusion. I know at least that this is the case among the dairy stock in Edinboro; even their constant attendants rarely remark anything unusual about them, until the disease is considerably advanced, and I have even in some instances, although happily they are rare, known one animal to be in the last stages, before anything like serious attention was paid to her case, so apt are their owners to attribute diminution of the appetite and milk to something trivial.

Amongst the very earliest of the symptoms, there is a disposition to restlessness, the cow moving from off one fore foot and resting her weight on the other alternately, and the urine diminished in quantity and much higher in color, with a strong disagreeable odor; in unfavorable cases this condition of the urine remains all through the disease. If on this appearance of the urine, some of it be collected and tested by some competent person, and there be found to be an almost or total absence of the chlorides in it, we would be warranted in suspecting that some inflammatory disease of the lungs existed; our attention would at least be drawn to those organs requiring a careful examination. The urine is generally observed to be unusual like, just a few days before the animal begins to shy her food. They lose their appetite generally gradually at first; if they leave off feeding all at once, which they sometimes do, it is an unfavorable symptom, such cases generally running their course rapidly and fatally, and more especially if the same is observed of the *milk.* The udder at an early stage of this disease is very hot, the teats unusually so, and painful. There is a falling off of the yield of milk, but as I have said above, if it is suddenly suspended we have reason to apprehend the worst. Many cows continue to give milk all through the disease, even although they are not eating much, which is a favorable symptom, indicating a good constitution, and a tendency to an early return to health. The animal now appears dull and listless—back slightly arched and head poked out; the hind legs are brought forward beneath the abdomen. Many attach importance to the circumstance of the animals flinching on being pressed along the spine. This, however, is never a symptom of disease amongst dairy cows, as almost any cow in health will do so. The withers are cold; irregular heat of the extremities and ears, the former usually inclined to be cold; the eyes are unusually bright and injected; there is a knuckling of the hind fetlocks frequently observed in the earliest stages, indicating inflammation of the pericardium and pleural membranes within the chest; rumination is suspended; the forelegs are posed, with the toes inwards and elbows outwards, to assist respiration by affording increased chest room. The respiration is short and hurried, averaging at first from 30 to 40 acts per minute; pulse at first hard and quick, averaging 76. Both the respiration and pulse, however, quickly change; the former become heavy and oppressed, and accompanied with a characteristic grunt at each expiration; this sound is also produced by pressing the cow over the intercostal spaces, and it indicates the adhesion of the pleural to the inside of the ribs. The pulse, at first hard and quick, changes to a quick weak pulse, with which change we generally have emaciation—the nostrils are expanded with a muco-purulent discharge issuing from them. Cough is generally present, but it is not always a symptom. At first it is dry and husky—latterly becoming short, hacking, and painful. The dung at first is inclined to be dry and hard, and deficient in quantity; as the disease advances it also changes, and we have diarrhœa present; this at an early stage of the complaint in young cows, and when other symptoms are favorable, is said to be a good symptom; but where it comes on later, from the presence of fermented food in the stomach and the impoverished poisoned state of the blood, it is a very bad symptom.

These, the usual prominent and most important symptoms of pleuro-pneumonia, now gradually become more aggravated as debility sets in. This is well marked in the staggering crouching gait, the extreme emaciation, occasional shivering, and weak tremulous pulse. There is now in most cases gaseous distention of the first stomach, and an apparent bulging out of the thoracic walls, the belly tucked up, skin yellowish and adhering closely to the ribs; the surface of the body is cold, she grinds her teeth, and there is a discharge of saliva from the mouth. Along with the distension of the stomach, we have frequent eructations of gas up the œsophagus. This is often present in the early stages, and is a good diagnostic symptom.

Unlike the horse, cows afflicted with this disease will lie down; but this is accounted for by the difference in the anatomy of the parts—the broad flat sternum and a peculiarity on the lower articulation of the ribs, admitting readily of lateral expansion of the chest. If one side is affected, she will lie upon it or towards it, so as to free the other for respiratory purposes; and if both are affected, she will either stand, or lie upon the sternum, and occasionally on each side alternately. Auscultation is in this disease a valuable aid in enabling us to form a correct diagnosis, but it can only be practiced by those conversant with the healthy or unhealthy sounds of the chest, or by the scientific veterinarian—although I know many men, who from long and often dearly bought experience, can at once tell an animal afflicted with this disease, merely from the symptoms I have given, and without at all studying the condition of the lungs.

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* We think there is no doubt but that occasional instances of Pleuro-pneumonia occurred in this country some years previous to the date mentioned by our correspondent, several of which have been fully described in former volumes of this paper. Eds. Co. Gent.

The duration of pleuro-pneumonia differs much in different cases, according to the age, breed and constitution of the animal and the state of health immediately preceding its contraction. Young cattle stand the disease well, that is from two to five years old; younger and above that again they have not the same capabilities of resisting it. Cows of a medium size and weight, and well proportioned bone and muscle, such as the Ayrshires, stand well, while on the other hand I have generally observed that poor, ill-conditioned cross breeds, and large, heavy bodied cattle sink rapidly. The incubative stage is said to extend to the sixth week; at least those who believe in its contagious or infectious character, do not consider their cattle safe until that time has expired; indeed they often show symptoms before that time, counting from the period when they were known to be in the vicinity of diseased stock, often just about the sixth week, but rarely after it, unless from some other cause not recognizable. The active febrile stage rarely lasts over eight days, as the lungs become early hepatized, typhoid fever sets in, and debility, followed by collapse and death varying from a fortnight to a month from the time the cow is first observed ill. Those cases which last out through all the stages generally begin to recover tone and appetite in about two months, and some not till as late as the tenth or eleventh week.

The duration and comparative fatality of the disease is also influenced to a great extent by the amount and situation of the lung tissue involved; thus if both lungs are attacked at once, the case is very bad. At other times, one lung is affected near the centre of it; this also is bad, but not so much so as the other. Sometimes it attacks the lower edges of the lungs, and proceeds upwards and forwards. Such cases often get better, even although the whole lung be utterly useless for respiratory purposes, provided the opposite lung does not become involved, and I have known many cases get better where even both lungs were affected from the first, their lower and posterior edges being chiefly implicated. After much observation I have come to the conclusion that the danger is increased materially as the disease nears and involves the centre and anterior portions of the lungs, and more especially if the investing membrane of the heart become implicated. Also that the lung on the right side is the one which is most frequently attacked.

In my next I will follow up this subject, treating of its nature, post mortem appearance and treatment, &c.

R. RUTHERFORD, V. S.
Edinburgh, Scotland, June, 1862. Late of St. John, N. B.

FOUL IN THE FOOT.

Editors of Country Gentleman—Can you or any of your readers give me any information in regard to the "hoof ail" in cattle. The cows on my farm have been troubled with it for 4 or 5 years. There are two kinds of it, one which breaks above the hoof, and another between the toes. The former is by far the worst form of the disease, and makes the cow lame for a long time, and is not at all effected by remedies which will cure the other. What causes it? The books say, wet pastures. My pastures are not wet at all; and it is only the *new* cows that are subject to it. Cows that have been on the farm for a few years do not have it. Nor have I known a cow to have it twice, or in more than one foot. Now I would like to know what causes it? What are the remedies for it? Whether it is contagious? and why they never have it more than once, or in more than one foot?

It is a serious thing in a dairy. The cows lose flesh, shrink their milk, and do not get over it all summer, and some for a year or two. I would like to find a remedy for it, but still, as the old woman said about her cold, I would not care so much for the "ail," if I only knew what cured it. S. L. F. *Palatine Bridge, N. Y.*

We invite the attention of cattle raisers to the facts here stated, and shall be glad to receive any information founded on experience. We have heard or known of several remedies. We would propose one for trial, that we think might be useful, although we do not know that it has been tried. Wash the part well with a solution of chloride of lime, the strength of which to be according to foulness of the disease. Then wash with Castile soap, and apply a charcoal poultice. The latter may be merely a mixture of fresh charcoal pulverized and mixed with meal. Perhaps this poultice would answer alone, after simple washing. Currier's oil is said to be good, and may answer a good purpose in certain stages of the disease. Tar, or rosin, heated on the surface by passing a thin heated iron against the parts, between the hoofs, has also been recommended, but we think it not equal to the other remedy. Dadd recommends astringents and antiseptics, after an ulcer has formed, as follows: Tincture of matico, 2 ounces; pyroligneous acid, 1 pint; glycerine, 4 ounces. Mix these together and saturate a small piece of sponge, introducing it into the cleft of the foot. Wash the contiguous parts with the mixture, and bandage the hoof to secure the sponge. If there is any heat, keep the bandage moist with cold water.

We cannot throw any additional light on the cause.

[For the Country Gentleman and Cultivator.]

DISEASE AMONG LAMBS.

Messrs. L. Tucker & Son—Noticing an article in the Country Gentleman of June 12th, from W. D. Dickinson, upon disease among lambs, I will give my opinion as to what causes it.

Having lost a number with the disease he describes, I think that high feeding just before the ewes drop their lambs, causes it. I never lost any by this disease before, and have raised every lamb from the same buck and ewes in about the same condition. I account for it in this way: Some ewes, lambing first and in good order, had fine smart lambs—others dropping their lambs a few days after additional feed was given them, had diseased lambs, living a day without getting up, having hound-like ears and large bunches under the throat. The greater share of them died. The diseased lambs were not dropped by the sheep in the highest order, but were from those that were strong and hearty, probably getting more than their proportion of the grain. I am satisfied that the high feed just before lambing caused this disease; still all are liable to be mistaken. C. V. Devendorf.
Mohawk, N. Y.

Very Well Put.—Some one writes both gracefully and forcibly:—"I would be glad to see more parents understand that when they spend money judiciously to improve and adorn the house, and the ground around it, they are in effect paying their children a premium to stay at home, as much as possible, to enjoy it; but that when they spend money unnecessarily in fine clothing and jewelry for their children they are paying them a premium to spend their time away from home—that is, in those places where they can attract the most attention and make the most display."

[For the Country Gentlemen and Cultivator.]

A NEW HORSE-POWER CORN-HUSKER.

Eds. Co. Gent.—I take the liberty to call the attention of farmers, to the fact that on the 24th Dec. last, I obtained letters patent for a machine to *husk corn by horse power*. I am persuaded that any farmer who raises corn, will gladly be excused from the necessity of husking it by hand, particularly when he understands the advantages this machine confers, and let me state some of them. The corn having been cut up as usual into rather small shocks that it may dry or season quickly, after which two or three teams and harvest wagons are taken into the field, and the shocks pitched and loaded on the wagons, and brought to the machine in the barn or wherever the corn and fodder may be wanted. The whole stalks and corn is then fed into the machine in the same way that wheat is into a threshing machine, and is cut into three or four inch pieces, when a blast of wind separates all the leaves, shucks and light stalks from the corn, making the most valuable kind of fodder for any kind of stock, and separating the heavy butts from the corn by sieves, and performing the operation with great rapidity so that with suitable attendance the machine will husk 1000 bushels or more per day. Thus as soon as the corn is dry enough, and before the fodder is weather beaten and almost worthless, it can be secured in the most beautiful condition, and stored in the barn as hay in one third the room it would occupy as stalks. This advantage alone is worth the price of husking. Again, two or three fine days is sufficient to secure a large crop from a host of vermin, and cold and changeable weather, not to say winter, and gives much more time for other fall work—saves a great amount of suffering from rhumatism, colds, &c., the common consequences of husking in bad weather.

We shall endeavor to have the machines manufactured by responsible men in all suitable localities. We feel assured that so soon as they are known, it will be difficult to supply the demand. Is not this good news for the farmers? Joseph Young.

Highland Park, Ill., June 26, 1862.

REPORT FROM A ONE-COW DAIRY.

Eds. Co. Gent.—Several of my neighbors have said to me this spring, "how much butter do you make from your cow?" The answer I have given them I place at your disposal, if you think it adapted to promote the objects of your paper.

Let me premise, however, that my cow—I have but one—is seven years old this spring, of native breed and medium size. She dropped her last calf the 28th of March, having been previously dry about ten weeks. Her calf was sold when ten days old, since which time we have made 86 lbs. of butter.

But I wish to speak more particularly of the last month. During May we made from said cow 50 lbs. of butter, sold one quart of milk a day, and used what was necessary in a family of ten persons, not less than from one quart to three pints daily.

"Oh pshaw!" says some doubting reader, "that's a yarn. I'd like to see the cow that did that. The sight of her would be good for sore eyes."

"I don't know," says another, "my neighbor tells me of a cow he had which made 2¼ lbs. of butter a day, one season for a short time, during the flush of pasture. Perhaps she might have made 50 lbs. a month."

"Well, these are only one-cow dairies, any how," says the third, "and the cows were probably slopped all the time." To obviate all difficulties on this score, I will tell you how my cow has been kept. During the fall and early part of winter as long as milked, I fed my cows good ripe pumpkins twice a day. While she was dry she had only hay and cornstalks, what she would eat. After I commenced milking her again, I fed in addition beets, carrots or turnips, about half a bushel a day until my small supply was exhausted, and afterwards gave, for about three weeks, corn and oats ground together, in the proportion of two parts of the latter to one of the former. This lasted till about the sixth of May, since which time she has had only what she gets from good fresh pasture. I allowed her to run in the field as soon as grass started, which was about the 20th of April, as I always prefer to mix grass and hay, for a time, before the one is entirely supplanted by the other.

This is the cow, and this her keeping, and before long I expect to hear of some others which leave her entirely in the shade. But I can't help it. Let the record of the best cows be made. One object to be gained is, to make those farmers discontented with their stock, who think a hundred and twenty pounds of butter a season, a pretty good yield per cow. We have too many such cows around, and too many farmers contented to have it so. It ought not to be. S. R. *Clinton, June* 4, 1862.

AMERICAN POMOLOGICAL SOCIETY.

In conformity with a resolution adopted at the last meeting of this National Association, the undersigned, President thereof, gives notice that its Ninth Session will commence in the Hall of the Massachusetts Horticultural Society, corner of Washington and West streets, Boston, Massachusetts, on Wednesday, Sept. 17th, 1862, at 12 o'clock, noon, and will continue for several days. All Horticultural, Pomological, Agricultural and other kindred institutions in the United States and the British Provinces, are invited to send delegations as large as they may deem expedient, and all other persons interested in the cultivation of fruits are invited to be present, and to take seats in the Convention.

The present season promises to be the most propitious for fruit that has occurred for many years, and it is anticipated that the coming session, which takes place at the same time with the Annual Exhibition of the Massachusetts Horticultural Society, may be made one of the most interesting which has ever been held by the Society. All the States and Territories are urgently invited to be present, by delegation, at this meeting, that the amicable and social relations which have heretofore existed between the members of the Society may be fostered and perpetuated, and the result of its deliberations, so beneficial to the country at large, be generally and widely diffused.

Among the prominent subjects to be submitted at this session will be the Report of the Special Committee appointed to revise the Society's Catalogue of Fruits, and thus to ascertain what varieties are adapted to the different sections and districts of our country. The various State and Local Committees who have not already made their reports on the revision are, therefore, solicited to forward them, without further delay, to P. Barry, Esq., of Rochester, N. Y., Chairman of said Committee. And it is further requested, that all other reports, which are by the By-Laws made returnable to the General Chairman of the Fruit Committee, now deceased, may also be addressed to Mr. Barry as aforesaid.

Members and delegates are requested to contribute specimens of the fruits best adapted to their respective districts—to furnish descriptions of the same, their mode of cultivation, and to communicate whatever may aid in promoting the objects of the Society and the science of American Pomology.

Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable.

All persons desirous of becoming members can remit the admission fee to Thomas P. James, Esq., Treasurer, Philadelphia, or the President, at Boston, who will furnish them with the Transactions of the Society. Life Membership, Ten Dollars; Biennial, Two Dollars.

Packages of Fruits may be addressed as follows: "American Pomological Society, care of Mass. Hort. Society, Boston, Mass."

MARSHALL P. WILDER, President.

[For the Country Gentleman and Cultivator.]

CANNING FRUITS AND VEGETABLES.

WARNER, N. H., JUNE 30, 1862.

MESSRS. EDITORS—Last week being on a visit at the Shakers in Canterbury, I had the pleasure of testing some of their preserved fruit, and finding it very nice and fresh, I applied to a relative of mine, connected with the Society, for written directions for preparing and preserving fruits, vegetables, &c., in the manner in which they had been so successful. This, Miss HASTINGS cheerfully assented to, but somewhat reluctantly consented to the publication of her letter in the COUNTRY GENTLEMAN. But as it is one of their standing rules "to do good and communicate," she finally yielded to my wish in this matter; and it is with great pleasure I forward the letter for publication in the columns of your paper, for which I have no doubt, Miss H. will receive the heartfelt thanks of hundreds of her sex.

I hardly need call your attention to the beautiful writing, and the clear and concise language in which she has given directions for the several processes necessary for the successful preservation of the various fruits, &c.

It is necessary that the bottles, cans, &c., should be taken from boiling water, and immediately filled. Glass bottles should first be placed in cold water, and gradually brought to the boiling point, as there would be danger of their cracking, if at once placed in boiling water. L. BARTLETT.

SHAKER VILLAGE, N. H., June 26, 1862.

ESTEEMED COUSIN LEVI—Agreeably to your desire, I write to inform you of the manner in which we have preserved fruit and vegetables for several years past, with a good degree of success.

First. When the fruit is well ripened it should be gathered and dressed while fresh, carefully avoiding all that is imperfect, soft or decaying. Apples, pears, &c., should be quartered and cooked in water as for immediate use, with care that the quarters are kept as whole as is consistent. The same should be regarded with other fruit. When the fruit is nearly cooked, if you wish to sweeten, add sugar or molasses to the taste, and let boil till thoroughly scalded together, then put into the vessel boiling hot.

We use tin cans, of sizes from a pint to a gallon, stone jars of various dimensions, and glass jars made on purpose for preserving fruit. Glass bottles of any description answer a good purpose for small berries, if completely filled and hermetically sealed; but we prefer vessels with an aperture or mouth sufficiently large, at least, to admit a tablespoon.

The cans, jars or bottles should be perfectly clean and sweet, and before they are used should be filled with boiling water, which should be emptied immediately before being filled with sauce. Care should be used to have the vessel completely filled with fruit to prevent the admission of atmospheric air, which is liable to cause fermentation.

The top of the vessel should be wiped perfectly dry before sealing, that the wax may adhere to every part of the groove and cover. If glass bottles, stone or earthern jugs are used, the corks should be driven into the necks thereof even with the mouth, and tightly sealed to exclude every particle of air.

The sealing wax is made of rosin 4 oz., to ¼ oz. of beef or mutton tallow melted together, and after the cover is placed on to the fruit-can as close as it can be, turned into grooves made for the purpose, when hot, but not boiling. Let stand till cool, then place the vessels in a cellar or cool room where, if undisturbed, the fruit may remain for years in a state of preservation, if not exposed to frost.

N. B. When the can or bottle is open for use, there is frequently, even with the best preserved fruit, a scum or coat of mold on the surface, which should be carefully removed with a spoon, or if the mouth of the vessel is too small to insert a spoon, use a cork screw or wire hooked at one end, before the fruit is emptied out. Care should be taken to remove every particle, else it will hurt the flavor of the sauce. Be careful also not to let the crumbs of the sealing wax be mixed with the sauce, which would cause a bad taste.

We preserve in this way, hundreds of gallons of the various fruit and berries that grow on our soil, for our own consumption and for the market. Apples, pears, quinces, currants, gooseberries, raspberries, blackberries, blueberries, strawberries, grapes, tomatoes and garden rhubarb or pieplant. The foregoing varieties may be equally well preserved with or without sweetening, as best suits the taste and convenience. We have tried to preserve green sweet corn, green beans, peas, &c., but without success. Green currants may be easily preserved.

Although tin cans are considerably used with us, yet we are careful not to put into them the most acid fruits, such as very sour apples, gooseberries, currants, and the like, as the acid is liable to corrode the tin and injure the flavor of the fruit. Glass we consider preferable to any other material in which to preserve such fruits.

Cranberries can be preserved in perfection, without cooking, in large quantities, by spreading them on a frame covered with canvass, and placed in a cool room excluded from the light of the sun; and although they may shrink one-half their bigness, they will resume nearly their original size by soaking them a few hours in cold water before they are cooked. A few quarts, or a less quantity, can be kept equally well in a bag made of thin white cotton or linen cloth, and hung in a cool room as above. This fruit should be carefully looked over, and all the dirt, leaves, or soft and decaying berries removed before they are put into a bag or elsewhere for safe-keeping.

If you desire a very nice article, and white, of preserved apples or pears, stew the fruit in small quantities, in tin, sweeten with white crushed sugar, and put into glass jars as quick as possible.

If the foregoing directions prove of any benefit to your family or friends, the communication thereof will give me pleasure. Respectfully yours, HARRIET HASTINGS.

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[For the Country Gentleman and Cultivator.]

The Best Way to Dispose of Bones.

MESSRS. EDITORS—After reading the various communications which have been published in the Co. GENT. on the different methods of disposing of bones which accumulate about the premises of the farmer, and converting them into an available manure for agricultural purposes, I will inform your readers how I dispose of my stock of bones. All the bones which are obtained from the meats used in the family, are saved and carried to the hen house, and deposited there to be used when wanted. Near the bones is placed a flat stone large enough to break them on. At the commencement of winter I begin to break them up, and dispose of them in the following manner:—Laying the bones on the stone, with an old axe I pound them up fine enough for a hen to eat, and then let my hens *eat them*. In this way of disposing of bones it requires no sulphuric acid, potash or other costly drugs, which are somewhat dangerous for persons to use who are not acquainted with their nature. Neither does it require any fixtures to prepare them in, nor time and labor to manufacture the materials into a compost. The hens furnish the fixtures, time and labor, and manufacture the bones into as good manure as any that is made on the farm.

At the present time I do not propose to discuss the comparative merits of the various preparations of bones that are used for manure, neither am I prepared to decide whether bone manure or hen manure is the most valuable for agricultural purposes; but I am well satisfied as to the value of hen manure for any use that I have made of it. I believe it is an established axiom in agriculture, that the richer the food on which an animal is fed, the richer and more valuable will be the manure. As fresh bones contain much animal matter, as well as phosphates, the manure of hens fed with bones must be much more valuable than when kept in the ordinary way.

But the most profit which I obtain from bones used in this way, is the extra quantity of eggs which my hens produce when fed with the bones. I have found that it is necessary to give my hens a generous supply of animal food, as well as that containing phosphates, if I wanted them to lay well, and other things being equal, the supply of eggs has always been governed by the supply of these articles of food.

As my hens have the run of the farm when the ground is bare, they get a supply of animal and vegetable food, but in the winter season they must be furnished with these things from other sources. I think there is no one thing that furnishes a larger proportion of egg-producing food than fresh bones, as there is always more or less animal substance adhering to them. By making a little calculation with my bones and other animal offal, I give them this food several times a week during the season that they cannot get to the ground. Since I commenced feeding my hens in this way, the average weekly production of eggs has been full as large through the winter, as during any other part of the year. The price at which eggs sell for in this vicinty, is generally one-third more in the winter than in the summer, so that when the eggs are sold it makes a considerable difference to what it does not to have any eggs through the winter, as is the case with many who keep hens, and to sell what eggs are disposed of in warm weather, at the low prices which generally rule at such times. The past winter I kept fifteen hens. Early in the spring, a neighbor, on being told that my hens had then laid nearly fifty dozen of eggs since December last, said that "his hens had not laid an egg then, that he had not commenced feeding them yet to make them lay," their principal food previous to this being boiled potatoes and oats—thus showing conclusively in this instance, that hens must have the right kind of care and food to make the keeping of them pay well. C. T. Alvord.

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THE AGRICULTURAL COLLLGE ACT.

An Act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled, That there be granted to the several States, for the purposes hereinafter mentioned, an amount of public land, to be apportioned to each State, in quantity equal to 30,000 acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the Census of 1860: *Provided,* That no Mineral Lands shall be selected or purchased under the provisions of this act.

Sec. 2. *And be it further enacted,* That the land aforesaid after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections not less than one quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled, shall be selected from such lands within the limits of such State, and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share; said scrip to be sold by said State, and the proceeds thereof applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever: *Provided,* That in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents per acre. *And, provided further,* That not more than one million acres shall be located by such assignees in any one of the States. *And, provided further,* That no such locations shall be made before one year from the passage of this act.

Sec. 3. *And be it further enacted,* That all the expenses of management and superintendence and taxes from date of selection of said lands, previous to their sale, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied, without any diminution whatever, to the purposes hereinafter mentioned.

Sec. 4. *And be it further enacted,* That all moneys derived from the sale of lands aforesaid by the States to which the lands are apportioned, and from the sales of land scrip hereinberore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks, yielding not less than five per centum upon the par value of said stocks; and that the money so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished, (except so far as may be provided in section fifth of this act,)and the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where the leading objec tshall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts, in such manner as the legislature of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

Sec. 5. *And be it further enacted,* That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First, If any portion of the fund invested, as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum, not exceeding 10 per centum upon the amount received by any State under the provision of this act, may be expended for the purchase of lands for sites or experimental farms, whenever authorized by the respective Legislatures of said States.

Second, No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretence whatever, to the purchase, erection, preservation or repair of any building or buildings.

Third, Any State which may take and claim the benefit of the provisions of this act shall provide within five years, at least not less than one college, as described in the fourth section of this act, or the grant to such State shall cease; and said State shall be bound to pay the United States the amount received of lands previously sold, and that the title to purchase under the State shall be valid.

Fourth, An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their cost and results, and such other matters, including State industrial and economical statistics, as may be supposed useful; one copy of which shall be transmitted by mail free, by each, to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior.

Fifth, When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the States at *the maximum price, and the number of acres proportionatly diminished.*

Sixth, No State, while in a condition of rebellion or insurrection against the Government of the United States, shall be entitled to the benefit of this act.

Seventh, No State shall be entitled to the benefits of this act unless it shall express its acceptance thereof by its Legislature within two years from the date of its approval by the President.

Sec. 6. *And be it further enacted,* That land scrip issued under the provisions of this act, shall not be subject to location until after the first day of January, 1863.

Sec. 7. *And be it further enacted,* That the land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bounty land warrants under existing laws: *Provided,* Their maximum compensation shall not be thereby increased.

Sec. 8. *And be it further enacted,* That the Governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

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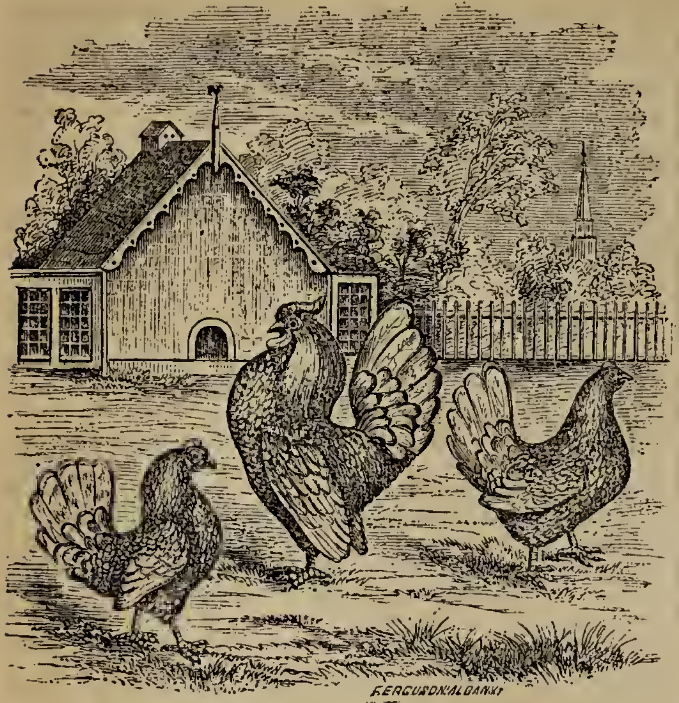
☞ We are pleased to see that our young friend, Mr. S. L. Boardman of Brookdale Farm, has been associated with our old friend Dr. Holmes, in the editorship of the *Maine Farmer.* We congratulate the Doctor on obtaining so capable and industrious an assistant, and Mr. B. that he is enabled to enter upon his editorial career under so competent a mentor.



[For the Country Gentleman and Cultivator.]

THE SEBRIGHT BANTAM.

Of all the Bantam family, the Sebright is perhaps the most popular. There are certainly very few, if there are any varieties of poultry, which for beauty and general appearance or conformation, are equal to the Sebright. Though extremely small in size, it is elegantly formed and remarkable for its grotesque figure and bold carriage, and must be considered more as an object of curiosty than utility, and of course must expect to be received with no particular favor in this country, except as "fancy fowls." The Cochin and Brahma for weight and quietness—the Sebright for haughty carriage and diminutive beauty. The attitude of the cock is indeed singularly proud, and we have often seen one of them bear himself so haughtily, that his head, thrown back as if in derision, has nearly touched the two upper feathers of his tail.

The gait of the Sebright cock is the very extreme of self-esteem, vanity and self-assurance, and when silently walking with his train on a lawn, in search of insects on the grass, or hurrying with the most agile and noisy impatience from the too near advance of your favorite dog, to some friendly covert of evergreens, it is impossible to conceive a more lovely ornament to the villa grounds, or one that claims more general admiration and astonishment from those who thus see them for the first time. The feet are raised in walking much more than in any other of the Bantams, and planted with the greatest deliberation and precision. When alarmed their deportment is most striking; the wings droop to the groond, not listlessly, but as if determined to make the most of their tiny proportions, while the head is thrown back and the tail is raised so that they all but meet.

The plumage of the Golden Sebright is of a rich orange or gold color; almost every feather is edged with a border of darker hue, approaching to black. The accuracy of marking is a very important point. Flecks of black on the ground color are great faults. The neat, slim and featherless legs are of a dull lead color; his ample tail, from which the sickle feathers are absent, is carried well over his back, nearly meeting his head, not unlike a fantail pigeon. His size is quite diminutive and his carriage saucy; his wings jauntily droop until they nearly brush the ground. He is as upright as a drill-sergeant, or more so, for he appears now and then as if he would fall backward, like a horse that over rears himself. Such are the characteristics of the true Sebright Bantam, which our artist has so faithfully represented in the portraits at the head of this article.

Much mystery has been attached to the process by which these birds were brought to their present state of perfection. Whether originally bred from selected specimens of the spangled birds—in most of which, as in the Spangled Hamburgs, certain feathers—those on the wing-coverts especially—are usually found of a laced character—or whether we should be content to place them as one among a numerous distinct branch into which this family have been divided, remains a matter of discussion, and one too, which at this date is not likely to be satisfactorily determined.

It is believed, and there is little doubt but this is a made breed, having been produced by Sir John Sebright, by careful breeding for generations. "The last object," says a writer in the *Poultry Chronicle*, "Sir John arrived at, was to improve the Bantam to a clear erect carriage. To effect this he obtained a buff-colored bantam hen; she was very small indeed, with clear, slate colored legs; at the same time he purchased a cockerel, rather inclining to red in color, destitute of sickle feathers, with a hen-like hackle, and also a small hen resembling a Golden Hamburg. After this, by drafting for five or six years, he gained the very pencilled feather he so anxiously sought after, and by in-and-in breeding for twenty years."

The Bantams are peculiarly *fancy* fowls; they have been accused of not being a useful kind, as, of course, there is little to eat on a fowl which when full grown should weigh, the cock one pound, the hen less, the eggs being small in proportion. But how many hundreds of amateurs there are whose opportunities give them no room for full sized fowls, but who, delighting in living things, can indulge their fancy and beguile many hours, which would otherwise prove weary ones, by keeping a few bantams. Their eggs, though small, are delicious.

Some time in March last, as we were strolling about the city, chance led us into a bird depot, where we noticed several cages of fancy fowls just imported from Holland, among which a trio of Bantams attracted our attention. The proprietor called them Silver Bantams, but they differed in several particulars from any which we have ever seen. They were the least in size, and the most beautiful birds of the whole family, and immediately reminded us of their namesake, the Silver Spangled Hamburgh, both in respect to the color and form of the marking, as also the shape of their combs. Many persons indeed would suggest the probability of their being the offspring of crosses between the above birds, being the very counterpart of the Silver Spangled Hamburg, with the exception of size and the sickle tail

This trio of Bantams, which our figure so well represents, were sold together with several other varieties of fancy fowls, which we may notice hereafter, and taken to the poultry establishment lately erected by M. D'Aubigny, at Fordham where he intends breeding all the different varieties in their purity. He has separate accommodations for sixteen to eighteen different breeds. Our earnest hope is that he may be successful in the enterprise, and be rewarded according to his deserts. C. N. Bement. *New-York*, *June*, 1862.

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[For the Country Gentleman and Cultivator.]

A NEW WAY TO COOK BEEF.

When you get hold of a good thing it is well "to communicate." Having learned this method of cooking beef within a few years, we find it so much the best way that no week elapses without a meal of beef steamed upon our table.

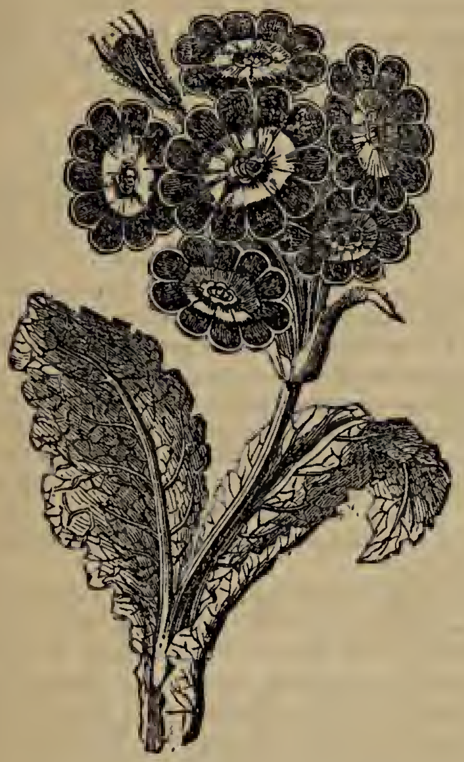
To steam beef, procure a cast iron pot of large dimensions, having at the bottom a shoulder, which is found in most large iron pots, at the point where the diameter is diminished to fit the hole in the stove. Across this hole you place some pieces of shingle; then fill up the pot to the shingles with water, adding a few pieces of lemon peel or a little mace if you please; place your meat upon the shingles; cover up tight with a fitted tin cover; place over a hot fire, and wait till done. You must be careful to add water occasionally, for if it should all boil away, of course the gravy would be burnt, and the flavor of the meat injured. When finished the bottom of the pot contains a large quantity of most excellent gravy, which, of course, must be thickened and seasoned.

A rump of beef, or a shoulder, forms an excellent piece to operate upon. Mutton is also fine. Try it.

Utica, N. Y. W.

THE DAISY AND POLYANTHUS.

Of early flowering plants, few are more beautiful than the Daisy and Polyanthus. The fine double varieties of these plants are very desirable, and should have a place in every garden. They require rich and moist soil, and a shaded, cool situation. The Daisy is not sufficiently hardy to withstand the cold of our winters without protection. The best method of keeping them is by means of a frame. They are readily multiplied by division of the roots.



PRIMULA ELATIOR OR POLYANTHUS.

The Polyanthus is more hardy, and most of the varieties will stand any ordinary winter without protection. The variety is great, those produced from seed being very diverse in their markings. Of the the full double varieties, there are white, yellow, and purple; of the single sorts, there are various colors, but the predominating one is brown, or brownish-crimson, with yellow eye and border. There are some sorts, semi-double, with small flowers, but they are not as pretty as the single or full double varieties. The time of flowering is in May or earlier, and the bloom is over as soon as the weather becomes pretty hot. They may then be removed and their place supplied with bedding plants from the green-house or with annuals.

The engraving gives a very good idea of the appearance of the single flowering sorts, though most of them bear their flowers on taller stems than that represented in the cut. G. B. H.

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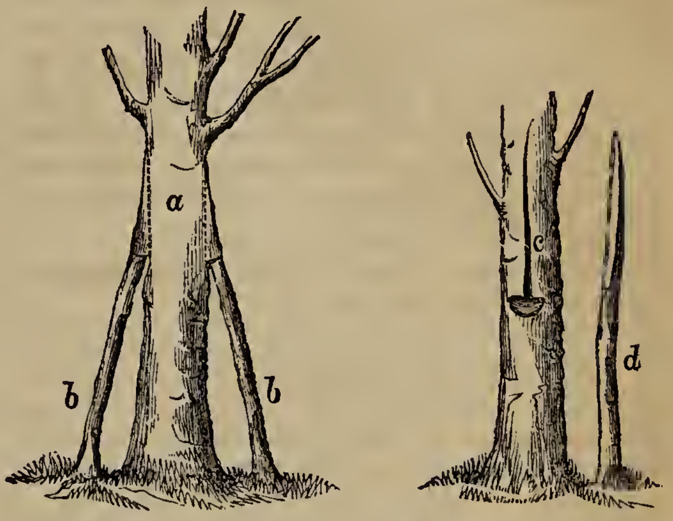
Dwarf Pears Changed to Standards.

It often happens that dwarf pears lose their vigor after bearing a few years, and many kinds live but a short time under the best management. So long, however, as they bear much earlier than standards, their cultivation will be continued in spite of this formidable disadvantage. To combine the advantages of both,—by changing the dwarf, as soon as its energies flag, to a standard, and thus secure its growth and productiveness for a century,—has long been a desideratum. To accomplish this purpose, some pomologists have recommended the practice of planting the dwarf so deep that the place of union between the pear and quince may be some inches below the surface of the earth, that the pear may throw out roots for itself.

This is however attended with objections. If the pear does not root while the tree is yet young and thrifty, and when it is most desirable to retain the character of the dwarf, it will not often root at all. Besides, but few roots are thus thrown out, and frequently on one side of the stem, so that the tree is unequally supported, and it often lops over or becomes prostrate.

A mode of effecting the desired object, was described some years ago by J. M. Earle of Worcester, and has since been adopted very successfully by James Oliver of Lynn, who recently described to us particularly the mode of performing the operation.



a. trunk of dwarf pear tree—b. b. pear stocks inserted into it, for new bottom—c. cut for receiving the pear stock—d. pear stock, cut sloping before insertion.

He allows the dwarfs to grow and bear, until symptoms of decline make their appearance. Two thrifty pear seedlings or stocks are then planted on each side of the trunk, and as near to it as practicable,—within an inch or two if possible. No harm will be done if some of the quince roots should happen to be cut in setting them. They grow one year. Then, the next spring, as soon as the bark will peel, they are inarched into the pear tree. A new bottom is thus formed for the pear tree, and new vigor is soon imparted to it. A substantial two-legged tree is thus manufactured, and the quince ceases to perform its office. The mode of attaching the stocks to the tree is as follows:—Make a slit in the bark of the dwarf pear tree a few inches above ground, and across the lower end of the slit, make a cross cut, so as to form an inverted ⊥. If the tree is large, make a notch instead of the cut, sloping downwards, so as the better to admit the stock. Then bend the stock against this notch or cross cut, and mark it at that point. Then with a knife set with the edge upwards at this mark, cut the stock off with a slope two or three inches long. It is then easily bent and inserted into the slit. It may be covered with grafting wax, but grafting clay is much better for this purpose. This is made of clay or clay-loam one part, and horse manure two parts, well mixed together—the addition of a little hair is an improvement. Cow manure is entirely unfit, being too compact with the clay, and not possessing the fibrous character of the other.

Dwarf pears that had nearly ceased growing, have been restored to vigor in this way.

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Dioscorea Batatas.—Messrs. Overman & Mann of Bloomington, Ill., report that "three years since they set out three thousand cuttings of this plant, nearly all of which grew. They are nearly hardy, killing back but little. At the end of two years they are dug, when the roots are of fair size, but of little value for food."

Fruit Growers' Society of Western New-York.

[Reported for the Country Gentleman.]

The Fruit Growers' Society of Western New-York met at the Court House in Rochester, at 11 A. M., on the 25th of June—the President, H. T. Brooks, in the chair.

Pruning Dwarf and Standard Pear Trees.

The following question was discussed—What is the best form of pruning the Dwarf Pear Tree? and what the best for the Standard, and the best season for doing it?

W. P. Townsend of Lockport, said he was decidedly in favor of the pyramidal form, cutting pretty severely, and leaving the lower branches the longest. Pruned after the severe frosts were past. If pruned too early, the frost injured the top buds. Care should be taken to cut to the bud, which would make the top even. The habit of the pear tree is vigorous, and bears close pruning. Would cut off the limbs from the body about one foot high before letting the tops come out. Would have the limbs come out about 18 inches or two feet. If the tree is vigorous, would not cut so short as if the tree was not.

G. Ellwanger did not prune sorts of vigorous growth as severely as those of more moderate growth.

C. Downing of Newburgh said the upright kinds should branch lower than those that grow more horizontally.

E. Moody of Lockport, thought dwarf pears should be pruned *inside* as well as *outside*—they should be thinned out on the inside. The plan of shearing like a cedar, the outside of the tree, will in a little time spoil the tree.

C. Hooker said he had found the same difficulty in pruning—the inside of the tree was growing too thick, and he found it necessary to thin the inside.

H. N. Langworthy thought it was evident that the pear cultivators were on the extreme in pruning so close. He thought it necessary to give the tree a little more room—not to prune so close—would cut the inside out of standard pears—would take out the leader. The trees are disposed to make a leader, but by cutting it out, it makes the tree wider and better shaped.

Mr. Lee of Newark, cut back in August in order to get fruit spurs, and so fruit the next year.

Pinching Pear Trees.

G. Ellwanger—The first advantage of pinching is in checking the growth, and thus assisting the formation of fruit spurs. It also assists the job of pruning in the winter. Generally performs the pinching in June, when the young shoots are about six inches long. He only pinches those shoots which are intended to bear fruit the next year. He never pinches the leading shoots. The object of pinching is to make fruit-buds, and also to thin out the inside of the tree.

Use of Ashes, Lime, and Charcoal in Orchards.

The President thought charcoal a very valuable material to use as an absorbent of manure. His apple trees, planted on old charcoal-beds, are very much improved indeed, and were probably twice as large as the others in the neighborhood.

Mr. Harris of Rochester, asked if there was not considerable ashes in the soil, and was answered in the affirmative.

Dr. Beadle had used pure charcoal as a manure, and could not see that it produced any effect. Thought it its principal benefit was owing to the burnt earth, which was always found in old charcoal-beds, and which was found in England to be very valuable for fruit trees.

Dr. Sylvester of Lyons, had found considerable benefit from it. Thought muck a material very similar to charcoal, producing very similar effects.

Fire Blight on Pear Trees.

The President had thought that the blight of pear trees might be owing to the use of animal manure.

L. B. Langworthy was perfectly dumb-founded as to the cause of the fire blight in the pear. Thought the use of animal manure was perhaps the cause. He thought it was an overstock of sap, which could not be elaborated by the leaves—it was in fact *plethora*. Charcoal he considered to be of very little or no value; but ashes he considered to be extremely valuable—never saw any situation in the world in which it was not valuable—good for everything.

B. Fish had in one instance a tree which showed considerable inclination to crack, but upon putting on a large application of soap suds and ashes it recovered from the disease, and has not cracked until this year.

S. W. Holmes of Syracuse—A German gardener in his city raised a very excessive quantity of fruit in his own garden by the free use of ashes in the ground. He also had noticed in his own grounds a very decided benefit in regard to the quality and early maturity of the fruit, and caused probably by the ashes.

Application of Manure.

Question.—The application of manure to the surface. At what season is the application most beneficial, and in what condition should the manure be when applied?

E. Moody, Lockport, has always been opposed to surface manuring, as being too wasteful. If it was to be used at all, he would use it in the spring early. It would leach some, and would then serve as a mulch to the plant.

E. W. Sylvester of Lyons, thought it not best to apply fresh manure to the surface as it would lose all its ammonia, but would recommend composting by putting muck and manure in alternate layers until the pile is five or six feet high. This remains until fall, and then is fit for use. It is found to be well rotted, and fit for any use. This compost he used as a surface mulching, forking or dragging it in in the spring.

C. Downing would recommend putting composted manure on the trees in the fall, and fork it up in the spring.

H. N. Langworthy has been using liquid manure made from night soil, and found remarkable effects from it—greater effect in fact than he had ever seen before from any other manure. Old bearing pear trees had made a growth of five feet in some instances, and in all had grown remarkably.

The Currant Worm.

Question.—The Currant Worm? What are its habits? What are the most effectual means for its destruction?

Geo. Ellwanger—During the past month we have used slack lime every day or every other day, and have succeeded perfectly, destroying all of them—covering the leaves and fruit with the fine dust. It does no harm to the foliage or fruit. He considers it a complete remedy.

H. N. Langworthy has used a solution of soft soap and water, *very strong*—had had perfect success—killed the worms without fail—must be put on often.

Dr. Beadle had found the use of air slacked lime a perfect success in killing the worms.

Dr. Sylvester had used one pound of whale oil soap and four gallons of water, and succeeded entirely in saving the fruit and killing the worms—had pursued the same course this year, so far with perfect success. He applied it every other day.

The White Grub.

Question.—The White Grub? What are its habits? What are the most effectual means for its destruction?

L. B. Langworthy—The white grub is the larva of the May-bug. It is four years in completing its growth—is most destructive in its third year. He thinks it impossible to destroy it, except to dig it up and kill it. It is particularly destructive to strawberries.

Geo. Ellwanger had *always* found white grubs to be plenty in grounds manured by night soil—would never use it until composted three or four years.

E. W. Herendeen had tried clear salt to kill the grubs, without success.

Salt for Quince Stocks.

Question.—Has the use of Salt been found to be beneficial to Quince Stocks? or to Plum Trees?

Geo. Ellwanger had applied salt to pear and plum trees, and found it produced a wonderful effect—would apply six or eight barrels to the acre—would use as much as a peck for a large tree, as large as a large apple tree. Uses it in February. Puts enough on to make the ground white.

C. Downing thought salt good for all vegetation, but it would do no good to kill insects.

W. P. Townsend had used salt for many years with the best results, for quince trees.

Dr. Sylvester said there was a limit to the use of salt—it must not be used in excessive quantities.

New Strawberries.

Question.—What new varieties of the Strawberry have been found to promise well in the experience of this Society?

Dr. Sylvester thought Frost's Filmore a valuable new sort. He thought the crop a full average of other sorts. Cutter's Seedling he considered a valuable sort, also. In Boston it was highly prized. The Austin Seedling too soft for carrying well.

The Society then adjourned to meet at Rochester on the first day of the State Fair of the New York State Agricultural Society.

[For the Country Gentleman and Cultivator.]

THE HISTORY OF ONE SHEEP.

Messrs. Editors—I read in the N. Y. Argus under date of May 31st, that it was not profitable to save twin lambs for breeders, stating that the sheep were smaller and the growth of wool was less.

Now I will give you the history of one sheep which is kept upon my father's farm, and owned by my youngest brother, James T. Beal, a lad of some thirteen summers.

The sheep I am speaking about, is from a small fine wool ewe, and a splendid buck, (cross between the Cotswold and South-Down,) from the yard of Col. Joseph Juliand of Bainbridge. She was dropped Feb. 18th, 1856. The old ewe would not own her, so we were obliged to raise her as a cosset.

She was a very small lamb, for when she was a week old she could not have been larger than a large rat. But she grew finely, and now is much larger than her dam, taking after the buck, I presume, for size. She did not have any lambs until she was three years old. The fall before she was three years old, he got a large coarse-wool buck and put in with her, but she would have nothing to do with him; but he was not to be out-witted by her this time. He got a rope, put it round her, and tied her to the nearest fence-post. The result of this trouble was a nice pair of lambs—one a buck, the other a ewe. When the lambs were a year old, he had them sheared. The old ewe never sheared less than six pounds. One of the lambs sheared 8½, and the other 7¼ lbs. When the lambs were a year old, the old ewe had another pair of lambs, both were ewes.

When his first pair of lambs were two years old, he sheared the five, receiving on an average per head about seven pounds of wool of a good quality. The old ewe had another pair of ewes—also his first ewe lamb had one, and his yearling ewes had each of them one, making five lambs from four sheep, which gave him nine sheep, which he wintered. He would have had ten sheep, but last fall we killed the male sheep of his first pair. His meat weighed 102 lbs., besides the pelt and tallow.

This spring the old ewe had another fine pair of lambs—one a buck, the other a ewe, making eight lambs that she has had in three years. His ewe that is three years old, had this spring a nice pair of ewe lambs—also his ewes that are two years old, had each of them two lambs, making four pair of twin lambs this spring. Also, two of his yearling ewes have had a lamb, making an aggregate of 20 sheep in three years from one ewe. He had his sheep sheared the 24th of May, and his flock averaged about 6¾ lbs. per head.

My brother takes the whole care of them, both summer and winter. He salts them regularly once a week, sees that they have good clear water constantly, and has them sheared according to his own notion. He has his lambs come about the last of April or the first of May, so that they can have plenty of grass, with the milk from the dam, to make them grow rapidly. He lost one last winter when about half grown. It was one of his yearling ewes that lost it. He noticed in the morning when he fed them, that she was sick, and in the afternoon he took the lamb from her, when she got well without further trouble.

I write this to let others know what he is doing, and let them judge whether he is a shepherd or not. I would like to hear from others, who make a business of raising sheep, upon this subject, whether it is profitable to save twin lambs or not.

Let the boys of our country try their hands at raising fine stock, (for many times they will excel their fathers,) and then they will have something to encourage them to follow the most independent calling upon earth. Give the boys a chance to show what they can do on the farm, and more boys will take pride in staying at home and tilling their father's farms. The reason why so many young men at the present day are dissatisfied with farming, is because they do not have a chance to experiment for themselves, and they leave their homes, cursing the farm and every thing connected with it.

Boys in this "enlightened day" think they know something, and sure enough they do. All they want is a chance to show what they can do in the line of raising fine stock. Let those men who are able, give their sons some stock to raise and a piece of ground to till, and try and educate them in this important branch of business, for in a few short years the boys of the present generation will have to occupy their fathers' places if they are occupied at all.

Let all young men strive for themselves, remembering that they have it in their power to be somebody or not, just as they choose—i. e., they can be an honor to their country, an ornament to society, and a help to their friends.

Bainbridge, June 11, 1862. STEPHEN B. BEAL.

[For the Country Gentleman and Cultivator.]

CASHMERE (SHAWL) GOATS.

Messrs. Editors—Having lately been frequently inquired of in regard to Cashmere goats, I will by permission write a few lines touching on their adaptation, &c., to our climate. They have now been on my farm two winters, and although a part of the flock was bred in Georgia, some of which landed here in the night, and on rising in the morning I found a heavy snow had fallen, and a cold northwester driving soon after; yet no damage was sustained, though one of these was a small kid just weaned and shipped here. Last winter they had little or no care save an open and elevated lot, with winter pasture. When wet or very cold they slept in a stable, yet seldom had hay or grain, and often slept on the ground with nature's covering only over them, and on several occasions passed the night in this way. No variety of stock that I ever owned appeared so independent of man, or requiring so little care or causing so little trouble, and although most of them have not passed the age of two years, yet they have dropped kids each spring, viz., of '61 and '62, and further, they have raised them. They are always in fine health and conditon. Their fleece, to say nothing of their value for costly shawls, can readily be worked into garments of various kinds to clothe the body and feet. They so soon and so readily improve the offspring of the common she goat when she is bred either to a grade or pure Cashmere male, and their flesh so much like the deer, their pelts so valuable for rugs, robes, or for the saddle, that they are destined to become a considerable object among farm stock, and I may add their beauty forms a striking contrast with many of the uncouth animals to be met on so many farms.

Near Brownsville, Pa. J. S. GOE.

[For the Country Gentleman and Cultivator.]

Preparation and Application of Barn-Yard Manure.

The best manner of preparing and applying barn-yard manure was one of the subjects discussed at one of the Evening Meetings of the New York State Agricultural Society last fall at Watertown. One of the most important points in that discussion, was to settle what each of the speakers meant by *barn-yard manure.* Some man who devoted all his farm to the support of cows, would protest against moving manure from the sheds and piling it out in the sun and rain to be evaporated or leached out, and thus a large part of its value wasted. Another, who was a grain raiser, was quite as confident that if it was left in the sheds, it would fire-fang and decay slowly, and suffer greatly. These men did not understand each other, simply because each judged of the matter by the circumstances that surrounded himself. The man of cows had little straw or anything else to litter down his stables, and thus his manure was nearly all *cow dung.* The man of grain had vastly more straw than he could get his stock to trample underfoot and get in any condition to ferment properly, so as to reduce its bulk. Finally we worked out of this smoke, and came to understand each other, at least partially.

My case is that of the grain raiser. Usually we have a large surplus of straw, after we have used all our stock during the winter to trample it underfoot as an absorbent. Our sheep sheds will have from two to three feet of what we call manure, in depth, which we must take out and mix with the manure of the yards, and pile it up so as to have it receive and retain the greatest possible amount of the rains that fall on it. These piles *have never fire-fanged* with us; but sometimes the manure begins to fire-fang a little before we can find time to get it out of the sheds.

But why not draw this manure directly to the field and put it at work in enriching the soil? This question is constantly asked, and should be answered. The first reason is: the straw has not yet absorbed all it will and should, from the excrementitious matter mixed with it, and if it is drawn out and spread it will never absorb it. The next reason is: the whole mass is too bulky to be advantageously applied, either on the surface or to be plowed in. In fact it cannot be plowed under, (without some extra hand being required to bury it in the furrows,) by any process known to us. The third reason is: two or three loads of this bulky manure will shrink into one, by the time we are ready to apply it to grass or wheat in the fall, and thus it is far less work to pile in the spring and draw and spread in the fall, than it is to take the whole crude mass out in that season of the year when the ground is full of water, and so soft that the wagon wheels cut and puddle roadways, to the great damage of the field. I must here say that this plan of working our manure on our grain farms, is not peculiar to us, but is nearly universally adopted by all our neighbors and men everywhere, so far as I know, who are like situated.

With the grazier things are all different, and they are sagacious enough to do about the thing best for them. And Mr. Editor, allow me to say farther that so far as my travels have extended, I have found that farmers generally know about what is best for them to do in view of the kind of farming they are engaged in, and in view of their proximity or remoteness from market. And it is very dangerous to advise any very wide departure from the practices of the progressive farmers of any locality.

As to the point now under discussion in the Agricultural papers, relating to surface manuring, or manure deeply buried, I wish to say that on our lands I have no doubt that manure should be put on or near the surface. Ground intended for wheat, after the last plowing, when the furrows are as rough as the plow has left them, is just in the condition to receive the manure that has been reduced in bulk and mixed by the processes practiced here. The harrow will mingle it with the soil, and perhaps slightly cover most of it, if it is drawn across the furrows. Then roll the land and drill in the wheat, and leave the surface untouched behind the drill. If any thing will insure a crop of wheat *here*, this is the way to do it.

I have many times drawn unfermented manure from the yards in the spring, and put it on sod-land intended for corn, and plowed it under deep and well at great cost, but with very little benefit to the crop. The next time this land was plowed, I have seen this strawy manure, covered with white mold, in the bottom of the furrow. We do not follow this practice *now.* If we were to attempt to raise extra large corn, we should begin farther back, and manure the land when we put it into wheat; again while we were pasturing it; and save some well-rotted manure over a year, and top-dress the soil after we had plowed it; then harrow well, and plant with "great expectations."

The discussion now going on in your paper, in which my name has appeared, has led me to write the foregoing.

Fairmount, N. Y., July 4, 1862. GEO. GEDDES.

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[For the Country Gentleman and Cultivator.]

PROFITS OF POULTRY.

Messrs. Editors—When I wrote to you in May, I said I would tell you how I made poultry profitable if you desired it, and you said "let us have it." Now I will premise that I have no great profits to tell of, but I can show that keeping poultry may be made profitable to some degree, even when all their grain has to be bought. We have no other animals but hens about the house, and so save all the waste scraps from the table for them. My hens are of the common mongrel kind. I sell all their eggs, and this is my chief source of profit.

During the year 1861, from nine hens, I sold eggs to the value of $7.20, and in the fall killed nine fowls worth $1.80—total receipts $9. The value of my poultry feed, (of course the waste scraps are not estimated) for 1861, was $4.46. Profit, $4.54.

During the first six months of the present year, from nine hens, I sold eggs to the value of $4.82. The cost of my poultry feed for the same time was $1.72. Profit for six months, $3.10. I keep only a few fowls—of course the profits would increase in proportion to the number of hens.

I had rather poor success with the ducks I spoke of in my last: eleven were hatched, and in less than four weeks the rats had killed all but one. They took five ducks from under the old hen in one night, when the hen was shut up in a little pen in the yard. The others were carried off in the daytime. At the same time a neighbor lost eight young ducks. I have not been able to poison all the rats yet. I expect another brood of ducks to hatch soon, and I may lose them all in the same way.

On page 368 of the last volume of the Co. Gent., Avis recommends "an old tin pan or a trough" for my ducks. That would answer while they were small, but when grown larger, they could not *swim* at all in either. My hens do not lay well in the winter, as I suppose the Black Spanish fowls would; for from Nov. 15, 1861, to Feb. 15, 1862, only one dozen eggs were laid. G. M. *Conn.*

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KEEPING EGGS.

Is there any method by which eggs, if collected when perfectly fresh, can be kept until winter and be as good as new eggs, or nearly so? S. L.

They may be easily kept if placed in a cool place *on end.* Some think they should be placed on the small end; we have long known this to be entirely successful. Others insist they should be placed large end down—this has also succeeded. A small cupboard, with numerous shelves, bored with holes just large enough to hold an egg each, on end, is an excellent contrivance. It should be placed in a cool cellar. Packing in salt, ashes, bran, &c., owes its efficacy to the egg being placed on end—while excluding heat by the ashes or salt, is no doubt useful.

Reappearance of the Grain Louse.

It will be remembered that about this time last year a comparatively New Insect made its appearance in countless numbers on the Grain fields over a wide extent of territory, embracing portions of New-England and this State, but, so far as we are aware, not reaching very far into the interior, or at least not swarming in such quantities, after one had passed well into Central New-York and farther westward. We refer to the Grain Aphis, described at length by our valued correspondent Dr. Asa Fitch, on page 114 of vol. xviii of this paper. It did not appear to do much damage to the rye, wheat and barley; but on oats, particularly where the crop was a late one, it was thought to have lessened the product and weight very greatly. This was especially the case in Northern New-York, where the season was backward, but some damage was also laid to the account of this louse in the river counties, in which it was probably about as early as usual.

Dr. Fitch expressed the opinion that the Grain Aphis would not again overrun the same districts the present year. This opinion seems to be vindicated, as far as our information now extends, by the experience of the present year.

But we are beginning to hear of it, to the westward of its former range, in no less wonderful quantities than we had it at the East last year. We understand indirectly, that it is appearing in the western part of this State; the newspapers of Canada West speak of it as now covering the heads of grain in some fields, so thickly as to give them quite a brownish appearance, and a correspondent at Merrillsville, Michigan, under date of July 16th, writes us as follows:

> "Eds. Co. Gent.—All the spring and fall wheat in this vicinity was recovering under the influence of several rain-storms, from the effects of the drouth, and farmers were beginning to congratulate themselves upon the prospect of a good crop, when all these fair prospects were thrown to the winds by the appearance, jointly, of the midge and a strange insect resembling a louse, but of various brilliant colors, which covering all latish pieces of wheat, threaten to wholly destroy them. The latter mentioned insect is entirely unknown here, and I write to you for information regarding its name, manner of breeding, and probable effect upon grain. If you, or some of your many correspondents, will answer these queries through the Co. Gent., you will confer a great favor upon H. W. H."

For the information requested we refer our correspondent to Dr. Fitch's article above alluded to, and to other notices of the Grain Aphis, contained in vol. xviii of the Co. Gent. We do not think apprehension need be felt of serious injury to any other crop than oats.

It will be matter of interest, and worth placing on record, to obtain farther information as to the extent of territory through which this insect is now showing itself. If our subscribers who find it in any very large numbers on their farms, will apprise us of the fact, we shall be able to state hereafter with some degree of accuracy the ground it has gone over, and to judge with possible correctness as to where its arrival may be expected another year.

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[For the Country Gentleman and Cultivator.]

POLL EVIL.

On page 92, vol. 19 Country Gentleman, a cure is given for Poll Evil after it has commenced running. Now it is a good thing to know how to cure it at this stage of the disease; but I prefer to effect a cure shortly after its first appearance. Dissolve as much common salt in urine as it will dissolve when hot, and apply quite warm two or three times a day until a cure is effected.

Five dollars was paid a V. S. for this recipe. I have known several cases perfectly cured by it, and never knew it to fail. J. M. Knapp.

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[For the Country Gentleman and Cultivator

Fine Thorough-Bred Sheep in Vermont.

Rutland, Vermont, July 14th, 1862.

Messrs. Editors—I notice in your issue of July 10th, 1862, a letter signed George Butts, Manlius, N. Y., treating on fine wool sheep, and weight of fleece—also asking to hear from others in a similar way.

I am on a visit to Vermont in search of thorough-bred sheep, looking for myself instead of buying of eastern traders and speculators that visit our section annually, and being deceived, as I have been by them, and for the last time I think, paying them large prices (as I now find) for grade sheep. I have just returned from a visit to the farm of N. T. Sprague, Jr., of Brandon, Vermont. I was kindly shown over the farm by Col. H. H. Merritt, the shepherd and care-taker of the premises. And such sheep! It would do any lover of fine stock good to see them. One buck deserves special notice. He was two years old April 27th, 1862. He sheared this season 22 lbs. 9 oz. of white, handsome unwashed wool—(I weighed the fleece myself)—a perfect sheep in shape, with a strong constitution. Also 18 two-year old and 18 yearling ewes that sheared 424 4-5 lbs. of wool, (the average is 11 4-5 lbs. per head,) without selecting out the best, as is many times done, and giving to the public the weight of fleece of blood sheep—a piece of deception oftimes practiced upon the reading community. The above number of yearlings and two-year olds, are all that were raised on said farm in 1860 and 1861. The flock of thorough-bred sheep on said farm is 103. They sheared, as I am informed by Col. Merritt, 1,036 3-16 lbs. of wool. The wool is white as I ever saw—in fact I think that any wool-buyer would pronounce it a handsome lot of washed wool. It is a long staple with a white eke or oil, a strong fibre denoting a strong constitution and good breeding.

This flock was bred from the Atwood flock of Connecticut. Mr. Sprague informs me that when he commenced breeding them they only sheared six lbs. per head. He has almost doubled the weight of fleece. I say to sheep breeders of the west, what has been done, can be done again. I think that the west has the brains, capital and climate, to compete with Vermont and her sheep-breeders. Let us wake up to this subject, and raise our own fine stock instead of going to Vermont for it. We can do it by buying their best instead of their grade sheep, and in no other way. To be sure it costs more in the start, but it is cheaper in the long run.

I have visited many fine flocks in Vermont, and at some future time with your consent, Messrs. Editors, I will give your readers a brief sketch of my visit here—also a short history of sheep-breeding, as practiced in Vermont.

The crops in the valley of Otter creek are looking well. The western towns of this state, bordering on lake Champlain, have suffered severely with the drouth—grass not more than one-half the usual crop. Corn all through the state, is quite backward.

The war spirit in Vermont is above zero. I learn that she starts her first regiment under the new call for 300,000 men, to-morrow. If this is true, she will be the first in the field under the last call, if I am rightly posted.

In conclusion, I would say to sheep-breeders, can you beat the above described flock, confining yourself to the white eke or oil, with a long staple, desirable shape and strong constitution? *If so, speak out.* We go for improvement. Henry J. Brown

of Kalamazoo, Michigan.

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What is that which makes every body sick but those who swallow it? Flattery.

The Seventeen Year Locust in Kansas.

My Dear Co. Gent.—Again in my perplexity I turn to you. The locusts are overrunning this whole country, and the tops of the bushes on the skirts of timber and prairie look as though a fire had passed over them. They get on to my fruit trees and give them "fits," to use an expression more forcible than elegant. I enclose a sprout of a peach tree to show the manner they bore the limbs; it is like the effect of thrusting a large needle into the limbs; they leave eggs in the limb. Probably this specimen will get too dry to give you a good idea of their attacks here. The limbs become so weakened by the boring as to bend down and wither and die. Probably you know all this, and more.

One of my neighbors says the eggs form worms that within 60 days, or next spring, he don't know which, work their way into the ground, through the tree.

Will the Co. Gent., or some contributor, tell us what really becomes of the eggs, and whether there is anything to be feared from them, and if there is, how their ravages may be stopped.

Is the black grub as injurious to fruit trees as the white grub? r. *Doniphan Co., Kansas, June*, 1862.

The peach shoot sent has the usual appearance of the locust punctures. The eggs are slenderer than usual, or in diameter only about one-third their length, which is one-twelfth of an inch—diameter one-fortieth of an inch—but they may have contracted by the drying of the shoot. Harris says the usual diameter is one-sixteenth of an inch. Will our correspondent send two or three of the insects by mail in a small pasteboard box?

If these are the seventeen year locust,* as we suppose them to be, the trees will have sixteen years to rest and recover. We know of no remedy for such an army. This year, 1862, is not designated in any work we have seen as a locust year, and this account indicates that Kansas furnishes a new family, or one hitherto unknown. According to Dr. Fitch and others, there are nine different families already known, and this will make the tenth. The Hudson river region was visited in 1860—the next visit there will be 1877. Western New-York and adjacent regions 1849—the next 1866. Massachusetts, Western Virginia and Mississippi valley, 1855—1872. Pennsylvania and Maryland, 1851—1868. Portions of Western Pennsylvania, Ohio valley and Louisiana, 1846—1863. Northern Illinois and adjacent regions, 1854—1871. North Carolina, 1847—1864. Martha's Vineyard, 1850—1867. Connecticut valley, 1852—1869. Two or three of the latter may have been stragglers.

The larva remain under ground till the next period of their appearance—some suppose they feed on the roots of trees at this time, but their mode of living is not satisfactorily determined. It is certain they remain near the place they went down, as there are many cases where trees which they infested were cut away and entirely removed sixteen years before their abundant re-appearance on the very spot afterwards.

We have not been much troubled with the black grub, except in injuring very young and succulent trees. The white grub has proved quite destructive on older seedlings. We have found the best way to employ boys to dig them out and kill them—paying them wages by the day, or giving so much per 100.

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☞ The 2d Annual Fair and Cattle Show of the Rosendale (Ulster Co.) Agricultural Society will be held on the Society's ground, Union Course, Rosendale, on the 16th, 17th and 18th days of September, 1862. Israel Snyder, President; S. P. Keator, Secretary.

HORTICULTURAL ITEMS.

Propagating the Quince.—How is the quince propagated? If from seed, where can I obtain some, and at what price? g. w. h. *Onondaga Co., N. Y.*

The orange quince is easily raised from seed, like the apple and pear—but the true variety cannot be relied on when produced in this way, and the stocks thus produced must be budded or grafted with the genuine sort. The more common way is to raise the trees from layers, stools, and cuttings. The French quince for pear stocks is raised exclusively by stools and cuttings. Seed of the quince is not often offered in market.

Cultivation of Small Fruits—I wish to get some information through the columns of The Cultivator, in regard to the cultivation of the strawberry, raspberry and blackberry. What soil is best suited for their growth—kind of manure to use—necessary preparation of the soil—quantity of manure to be used on soil that will produce fifty bushels shelled corn per acre—best market sorts—best time for planting, spring or fall—cost of cultivation—cost of plants and where they can be obtained—profits per acre? Which of the three berries are the most profitable? Also, what is the best work published on small fruits? If you or some of your correspondents will please answer, you will oblige your subscriber. j. l. s.
Esopus, N. Y.

As a general rule, give the soil the same manuring that is required for the best corn crop. Strawberries and blackberries may not need quite so much as the raspberry. Good, well rotted stable manure, or compost, will be best. The only preparation of soil is good fine pulverization, by plowing and harrowing—if subsoiled or trench plowed, all the better, especially for the raspberry.

The best market sorts of the strawberry are Wilson's Albany, and Triomphe de Gand. In some places Hovey's is profitable. Early Scarlet and Jenny Lind are good early sorts, but less profitable. Strawberries with the very best culture and management will yield 2 or 300 bushels per acre, but half this is the more common crop. The profits depend entirely on the market, and skill in management—say $300 per acre, if well managed. The best market Blackberry is the Rochelle, (miscalled Lawton,) which at its best has borne 200 bushels per acre. The Doolittle, Hudson River Antwerp, and Franconia, are the best raspberries—they will yield half as much as the Rochelle blackberry, but sell higher. Cultivation by a horse is best for all these, and by far the cheapest—it need not cost much more per acre. It is essential for the success of the blackberry that new summer canes be pinched in when three or four feet high, to prevent a long straggling growth, keep the plants snug and compact, and promote fruitfulness. It is hard to say what the profits per acre will be for these different fruits, or which is most profitable, as so much depends on market and management. Pardee on the Strawberry, published by Saxton, and the first volume of Rural Affairs, contain much that is valuable on small fruits.

Improvement in Culture.—A few years ago, about one hundredth part of all the fruit trees and small fruits set out, were sufficiently cultivated, and resulted in success. Necessity has created an improvement, and there is more and better cultivation now than formerly. Purchasers of trees heard the favorable stories of great success and high profits, and thought that all they had to do, to be equally successful, was merely to purchase and plant the trees. Entirely failing, through total neglect of culture, they pronounced "all these stories humbugs." Nurserymen soon found that the greatest obstacle in the way of extensive planting, was neglected cultivation—for no one can be expected to purchase trees when he sees every one fail. Renewed efforts were therefore made, to introduce better management, and they are slowly succeeding.

A Beautiful and Splendid Plant.—We had the pleasure of seeing a few weeks since at New Bedford, Mass., a very fine specimen of the large new Clematis (C. azurea grandiflora,) in the garden of a gentleman by the name of Haskell, a young merchant of that place. The flowers are white with a slight shade of blue, and measured about six inches in diameter—some were six and a half inches. The plant covered a wire network trellis, four feet wide seven feet high—and on this trellis there were about *six hundred* of these large and showy flowers. The splendid appearance of the whole can be easily imagined. The plant proves perfectly hardy and remains on the trellis all winter without injury. It was procured of Parsons & Co. of Flushing.

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[For the Country Gentleman and Cultivator.]

CUTTING STALKS FOR FEED.

Those who have plenty of leisure might be well employed at this—but as a matter of business I think it will not pay—at least on an extensive scale. As the coarse heavy portion of the stalk is generally refused, unless sugar-coated, I prefer not harvesting this at all, but cut high, leaving a corn stubble 2½ to 3 feet high. This is preferable for many reasons: it is much less labor to the hand cutting, enabling him to put up one third more shocks per day. The shocks stand the hard winds much better when cut in this manner. One-half the weight is avoided in handling and hauling the fodder, and lastly the stock eat it all up clean, if you put it in a clean place.

We feed our fodder under dry sheds. Every morning from the 1st Nov. to the middle of April, we haul from 4 to 6 shocks, and lay the armfulls back against the wall on the ground. The next morning there is little or no filth perceptible, but enough of the dry litter is strewed about to afford the cattle a comfortable bed. In the spring when we wish to spread the manure—which we generally put on ground intended for potatoes—we back under our carts, and with the dung forks rake aside the top litter, and then we have about 12 inches in depth of solid, well mixed manure, which we find no difficulty in handling and plowing in. In another article I will describe another method of feeding, which I practiced one winter with success, in connection with straw as manure.

I will also send you an article on the cultivation and handling of Irish potatoes, having noticed some complaints in the Co. Gent., of the potato disease. I think my observations will prove of some value to those who have suffered or may suffer. A Kentucky Farmer.

Boone Co., Ky., June 18, 1862.

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[For the Country Gentleman and Cultivator.]

Fine Wooled Sheep in Onondaga County.

Messrs. Editors—I have just been reading John Johnston's letter, in which he speaks of having seen three of Mr. Geddes' rams shorn, the fleece of one weighed 16½ lbs. and the others 16¾ and 17¾ lbs. He also speaks of having seen the wool from a flock recently shorn, which averaged 6½ lbs. to the fleece. This is all good shearing, and well worthy of commendation, but I think there are other flocks and other rams in this county which will beat the above figures. The whole average of my flock, is 7 lbs. 3 oz., and my stock buck's fleece weighs just 17 lbs. of well washed wool, (a small sample is herein inclosed.) This buck has run with my flock during winter, and was not sheltered only at the pleasure of the sheep. Adding one quarter to the above weight—(this is the rule of reduction here for unwashed wool)—would make it 21¼ lbs., which is some more than Mr. Geddes' rams sheared when in the dirt. My ram is a Spanish Merino, bred in Vermont. I have not written this in a spirit of boasting, but to let your readers know the real difference in good sheep, hoping to hear from others in a similar way. George Butts.

Manlius, N. Y., June 21, 1862.

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[For the Country Gentleman and Cultivator.]

THE GRAIN LOUSE.

Eds. of Co. Gent.—A few days ago I wrote to you that the grain aphis or plant lice had made their appearance here. The first I discovered were on my winter wheat, 30th of June; they were then comparatively "few and far between," from one to four on some few of the heads of the grain; now, 5th of July, many of the heads are pretty closely packed with them. It is astonishing with what rapidity these insects propagate. In their breeding qualities they out-do all the rabbits and mice that ever ran upon "all fours," or even the most prolific mormon families in the Valley of the Great Salt Lake.

Some varieties of my wheat are so far advanced, that I think they will not be much injured by the lice—(nor the midge.) But we have great reason to fear that late winter and spring sown wheat, as well as oats and barley, will be much damaged by the aphis. L. Bartlett.

Warner, N. H., July 5, 1862.

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[For the Country Gentleman and Cultivator.]

THE BEST WHEAT FOR KENTUCKY.

Experience is one of the best guides by which the farmer can direct his course, in either the rearing of stock or in the cultivation of the various cereals and crops of our country. In general the Kentucky wheat has, up to a few days past, looked unusually promising; but within the last week, all or most of the white smooth head wheat has been taken with the rust, and to a considerable degree is more or less infected with smut. As I have over sixty-five acres of white wheat injured as above described, I have in riding through this county, taken care, by observation and inquiry, to ascertain whether all kinds, or the white alone, was infected by rust and smut. The result of my investigation, after seeing a number of our best farmers, is that the variety known as the Mediterranean bearded wheat, and indeed all of the bearded wheat, is free from rust, and comparatively free from smut. I am also told that for the last eight or ten years, when rust has more or less injured the wheat crop in this State, the bearded Mediterranean has been entirely free from rust, and preserving, as it does at present, up to harvest, a fine bright color.

There is a variety with us known as the Alabama bearded wheat, which is equally exempt from the above blight, and is a fine yielder. I shall however endeavor to sow in the fall only the Mediterranean variety, believing it to be the best for our latitude. Isaac P. Shelby.

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[For the Country Gentleman and Cultivator.]

TURNIPS AMONG CORN.

On the 30th of 7th mo., 1860, I had flat turnip seed sown among my corn after last cultivation—a boy ran after seedsman dragging a rake. Continued sowing for a day or two as the ground was ready. A shower following put in part of the seed sufficiently without raking. Ten acres were sown with no subsequent culture, yielded in addition to a good crop of corn, 800 bushels of turnips.

I have frequently thus sown turnips, sometimes successfully and sometimes entirely failing. It is an uncertain crop but certainly inexpensive. S. Allinson.

Mercer Co., N. J.

[For the Country Gentleman and Cultivator.]

RED CLOVER--Trifolium pratense.

My Dear Ned—The cultivation of the forage plants is comparatively recent. In England it was unknown till about 1633. When the early emigrants came from that country to this, they had little or no idea with regard to cattle food, but to depend upon the luxuriance of nature. A few of our northern winters taught them their error. In summer their cattle did well enough, but in winter they suffered much, and many of them perished. It became manifest, that in this climate a different policy from that which had succeeded but badly in England would be absolutely necessary. They resorted to the sowing of the grass seeds. The practice of the colonists reacted upon England. Other causes co-operated, and from that time to this there has been continued progress in that country in the cultivation of the forage plants; and probably no people to-day better understand, than the English, the importance of this cultivation, both to the production of meat and dairy products, and to the preparation of the soil for the cereals.

But while the forage plants generally are cultivated earlier in this country than in England, clover seems to have attracted attention there earlier than with us. It was introduced here early in the last century. It is red clover of which I now speak. White clover was indigeuous to both England and this country. When red clover was first introduced, the prejudice against it was so strong that about a century was required to overcome it. Whether the prejudiee is yet so entirely done away that we can fully appreciate its value, is doubtful.

Culture of Clover.

Thirty years ago, it was common to sow clover with the fall or winter crops. It is now pretty generally agreed that spring is the best time for sowing it. If sown in the fall, it is apt to kill out; or if it does not winter-kill, it comes forward too early for the good of the grain crop. With regard, therefore, to the winter grains, it is well to sow it either on the snow very early in spring, or on the wet ground as soon as the snow melts, and while it may have the benefit of the early spring rains.

In all other cases I think it should be sown in the spring or summer. In one case the summer is the best time, and in fact the only time; that is, for the August seeding of mow lands or old pastures. There is many a field in which the grasses do but poorly, not so much from exhaustion of soil as from other causes, and which it is well worth while to turn over and seed on the inverted turf. Invert these soils to a good depth; top-dress with ashes, (which contain lime largely,) or with lime itself; run the harrow with the turf, to produce a smooth surface; sow to clover, herdsgrass, and red-top; roll with a heavy roller, if the soil is light, but with a light roller if it is inclined to consolidate, and you will be pretty sure to find good mowing or pasturage, as the case be, on land that has become turf-bound, and was producing but little. If this is done in August, the clover will generally become so far rooted as not to be in much danger of freezing out.

There has been some dispute, whether clover is an annual, a biennial or a perennial plant. I would set it down as a perennial plant, that is, a plant which survives many years. It will not flourish, will not shoot forth long stems, and blossom and produce seed, any longer than there is an abundance of its chosen food (lime,) in the soil; but in any tolerable soil, it will live twenty or thirty years; and all this time it will be ready to put forth long stems, to blossom and produce seed, the moment you furnish it suitable food. If, on an old mowing, that was seeded with clover and herdsgrass 25 years ago, and has been mowed or grazed ever since, you examine the surface in June or July, you will find, that, down among the very roots of the grass, there are innumerable stinted clover leaves, not larger than the ear of a mouse, but large enough to show that the roots are still alive. If any drop in any part of that field a few shovelfuls of any mineral manure abounding in lime, as wood ashes, leached or unleached, common slaked lime, oyster shell lime, or old plastering pulverized, you will find that next year the clover will spring up and outgrow all the grasses about it, showing that it has lived the last quarter of a century, and been waiting all that time for something to grow upon, and marking in each case precisely the spot where the fertilizer fell. If you had dropped barn manure instead, the same would have happened in part, inasmuch as that also contains lime, but the preponderance of the clover would not have been as distinct, because the barn manure would have sent up such a growth of the common grasses, as would have choked down, or at least have concealed the clover. Any one who will try an experiment of the above kiud, will see that clover is long lived, whether strictly perennial or not. It is worth while for you to remember that clover is a lime plant, and that lime in wood ashes, or other fertilizers containing lime, are its appropriate pabulum.

The most suitable soil for clover is a rather warm loam, which contains lime either as a natural ingredient, or that has been added for purposes of cultivation. Next to lime, as a carbonate in the form of ashes, common or shell lime, perhaps its sulphate, (plaster,) is the most favorite food for clover. As regards the very common notion about clover sickness, as if land sometimes becomes sick of clover, I very much suspect there is more fancy than truth in it. When clover refuses to grow on a particular field, it is probably because the food it wants is not there, or is not in a condition to be taken in by the clover roots. You cannot too well understand that all plant food, in order to favor the growth of a plant, must be in solution. If you put a grain of salt, of sugar, saleratus, or soda, in a quart of water, it does not give the water a white or milky appearance; it is dissolved; it leaves the water as clear and transparent as before. It is in this perfectly clear, transparent solution, that all plant food is taken up. Of course there is a great deal of plant food in every soil which is not yet dissolved—it is not yet in a soluble condition—and therefore I believe the only clover sickness that soil ever has, is simply a deficiency of clover food in a condition to be taken in by the clover; and I believe further, that no man who practices a judicious rotation of crops, not continuing any one crop unreasonably long, will ever be troubled with clover sickness.

The clover seed has considerable size, and great germinating power. In sowing, there is not the same necessity for caution against too deep covering, as with the smaller grass seeds. It is well, however, to prepare for it a pretty smooth seed bed, and to cover to no great depth—say an inch, or rather less. In sowing it with any of the spring grains, I would rather harrow in the grain first, then bush in the clover seed, and after all, roll with a lighter or heavier roller, according to the nature of the soil. When seeding land for mowing, I hope you will adopt the practice of picking off the loose stones before rolling, instead of rolling them in. If rolled in, the frost is always throwing them out to trouble the scythe or mower.

Clover as a Fertilizer.

That clover is enriching to the soil, is now generally conceded. I regard it as the cheapest fertilizer the farmer can use. This, however, depends somewhat upon the locality, and is the more applicable where land is low, and of course its annual worth not great, for it takes a year to grow a large crop of clover roots, and if the annual rent of land is high, its use a year for this purpose cannot be afforded. Clover may in such a case, become costly beyond its worth for fertilizing purposes. Its value as a fertilizer will therefore vary with the value of land. Its fertilizing power I think depends mainly on three things: 1st. During its growth, like all other broad-leaved plants, it takes largely from the air, and then in decaying deposits its aerial or organic matter in the soil. 2nd. Its roots run deep, draw inorganic matter from considerable depths—often 20 inches or more—and subsequently deposite it near the surface, quite within the reach of the short-root plants. 3rd. The perforations by its roots, and the subsequent decay of these roots, tends to make the soil porous, more accessible to air and water, which in heavy soils is an important point to be gained. Other crops have been resorted to for green manuring; but where clover can be made to flourish, and that is nearly every where, it is doubtful whether any other is as good.

Is mowing, or feeding off, or plowing under, the best practice? To get light on this question, we must consider that the roots are the largest, and, for manuring, the best part of the crop. In view of this fact, I incline strongly to the opinion that mowing or feeding off the first crop and turning in the second is the better course; especially do I believe it to be so on light sandy soils. On such soils, I cannot but think the fermentation, occasioned by turning in a large green crop in the heat of summer, causes much of the fertilizing value of the clover to escape into the air and be lost. If I were now farming for myself, instead of advising another, I would certainly save the first crop of clover, either as summer feed or as hay. It may be that on tenacious soils the opposite course is as well, though I do not believe it is, and I am quite sure it can not be well on light sandy soils. I confess here to a feeling on the subject, which may have unduly biased my judgment. I have often turned under splendid crops of clover in June or early in July; but I never could do it without a feeling almost oppressive, that it was a sort of desecration of a sweet, lovely and beautiful gift of Providence; and with my present conviction, that the land is as much benefitted by the summer growth or first crop of clover, after the cattle have devoured it as before, I could hardly bring my mind to a repetition of the old practice.

Making Clover Hay.

A word with regard to the making of clover hay. In our sunny climate, I think we are apt to sun our hay too much. It should be made more in the cock. When hay becomes slightly warm in the cock, the water evaporates and the hay is less harsh and woody. More of it is soluble in the stomachs of animals. They like it better, and derive more nutriment from it. But there is an extra reason for not sunning clover too much; its leaves fall off and are left on the field. The better way is to cut it in the morning; let lie in the swath the first day; throw it into small cocks at middle of afternoon; turn these bottom upwards, at 10 or 11 o'clock the second day; throw two of them into one towards night; the forenoon of the third day, turn once again, and perhaps spread a little, if that seems to be required, and again put two into one in the afternoon; and so on till dry enough for the barn. A small degree of warmth does the hay no harm, but is a positive benefit—renders it both more tender and more nutritive. But take care not to store it till dry enough not to heat very much in the barn, and not to smoke when handled in winter. UNCLE ZEB.

[For the Country Gentlemen and Cultivator.]

Wool-Growing in Illinois.

There is much wool raised in this county, and much of it has been sold at from 40 to 47 cents per pound. A neighbor sheared six yearling ewes that averaged 12½ pounds. His bucks sheared from 12 to 18½ pounds of washed wool. They are Spanish Merinos.

Another neigbor had last year a flock of 500, that averaged 8¼ pounds. They are not all shorn yet this year.

These sheep are from Vermont, and I am told by their owners that the same sheep will shear a pound more per head here than they did in Vermont. We are troubled some with wolves. Many have lost lambs by them this spring. Most farmers yard their sheep at night. They are the large grey wolf. All this is in sight of the smoke from the great city of Chicago. A few miles from the city are large tracts of land owned by speculators, where large flocks and herds are kept during the day, and yarded at night. W. M. *Dupage Co., Ill.*

[For the Country Gentleman and Cultivator.]

COBS FOR FUEL.

MESSRS. EDITORS—Permit me to call the attention of farmers that may be shelling corn at this time of year, to the advantages of saving cobs for fuel. I have saved my cobs for several years, and have never found anything else so handy to make a fire when cooking feed for hogs in the fall, or in heating water for scalding, when killing hogs. They not only make a quick, hot fire, but they are easily kindled. Put a basketful of dry cobs under a kettle, and throw a small shovelfull of live coals over them, and in a few moments, without any further attention, they will be in a blaze. Then with a little coarse, rough wood, or any kind of chunks or old logs, old rails, or in fact anything in the shape of wood, and two or three baskets of cobs, will cook a kettlefull of any kind of feed.

When killing hogs, I have never found anything that would heat water as quick as cobs. With a few chunks and knots, such as always will be left when fitting wood for the stove, and plenty of cobs, I can heat water quicker than any set of hands I have ever had could scald and dress the hogs. Then cobs need no preparation; they are always ready. It is only necessary to have them stored where they will be handy when wanted, and kept dry. F.

[For the Country Gentleman and Cultivator.]

To Protect Seed Corn from Crows and Promote its Growth.

In the last number of THE CULTIVATOR is an article on this, which is no doubt effective, but we think the following mode less troublesome and quite as good. Put the corn in a basket, pour hot water upon it to wet and heat it thoroughly; let it drain a little; then pour it into an old box which you do not care to have soiled, and pour upon it a *very small* quantity of *coal* tar, stir it well with a stick until it is all coated; then add a little plaster or ashes to dry it. It will not stick to the fingers, and its growth will be much hastened by the process. Coal tar is best because it is so thin, but if it cannot be obtained, *heat* common tar until it is quite thin, and then there will be no trouble at all from the grains adhering to each other. I think ashes will promote the growth of the corn more than plaster when used to dry it.

Last season we had some corn left after planting the main crop, which had been coated with coal tar as described above and dried with ashes, and drilled it in a small patch for fodder. Not having a sufficient quantity of the prepared seed, we planted the remainder of the lot with dry corn, and the difference in the growth of the two lots was beyond our expectation. The tarred corn came up several days sooner than the other, and grew more rapidly throughout the season, making the heaviest crop in the fall. At the time the corn from the prepared seed was a foot high the other was only about half as large, although the soil was similar and both planted at the same time. Having a row planted with seed of each kind made the difference in the growth very prominent.

Corn may be planted near the barn when prepared in this way, without the necessity of cutting off the fowls' toes, or shutting them up, as they will not disturb it.

We once tried the experiment of soaking seed corn in a solution of chloride of lime and copperas, which receipt has been so strongly recommended, promising a wonderful growth, a gain of six weeks; but in our trial it proved worthless. We planted in the same box some dry corn, some soaked in warm water, and some soaked in the solution of chloride of lime and copperas. The dry corn came up soonest, grew the fastest and had the strongest roots. That soaked in warm water was nearly as good; while that steeped in the solution, did not grow so well, and many of the grains rotted in the ground. We repeated the experiment with a like result. DAVID STREET.

Salem, Ohio.

THE CULTIVATOR.

ALBANY, N. Y., AUGUST, 1862.

☞ Upon the invitation of Hon. Ezra Cornell, President of our State Ag. Society, we are pleased to announce that the Rev. Robt. J. Breckinridge, D. D., LL. D., of Kentucky, will deliver the Annual Address at the coming State Fair at Rochester.

Readers of the Country Gentleman are already familiar with the high reputation enjoyed by Dr. Breckinridge in Agricultural practice. Owning a fine estate at Brædalbane near Lexington, the pursuits of the farm have been always regarded by him as second only to those of the sacred desk.

But, during the present contest, to write and labor in the cause of the Union and Constitution, has taken precedence with Dr. B. over the duties of both the pulpit and the field. When the cloud of rebellion first rose above the horizon, he sounded an earnest note of warning, and, from that time to this, his course has not wavered in the great cause,—although, lacking as it did, the unanimous support of his fellow citizens and friends, the task of the Patriot in Kentucky was rendered one of peculiar difficulty and perhaps sometimes of personal danger.

We trust that the Farmers of New-York will show, by the general and hearty welcome extended to Dr. Breckinridge at their great Annual gathering, not only their appreciation of the manly and noble spirit of loyalty he has manifested so constantly and with an influence so effective, but also their determination to emulate his patriotism as a citizen and his zeal in the advancement of the Agriculture of the country.

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☞ Away from the close and hurrying streets of the cities,—away from their rattle and bargainings,—away from their walled-in bits of sky and tainted breezes, wealth with every successive year is coming to look more and more earnestly to the fresh atmosphere, and unbounded scenery, and welcome quiet of Country Life. Here, it has been discovered that new pleasures are brought within the reach of money; and the mind, if trained to habits of application in pursuits relinquished, will still find ample scope for renewed and constantly varying activity, in seeking to blend the beauties of Art with those of Nature, and its own higher culture with that of field or park or garden. The taste once called upon to determine the "architecture" of a brown stone front or decide the proportions of a counting-room, has here free play over lawn and hill and woodland, and may draw its own landscapes with decorative or creative hand, where each coming Spring-time will clothe them with increasing beauty and each succeeding Autumn bring the fruits of some new result accomplished.

There are abundant and bounteous favors which Nature dispenses with lavish hand for all. But she nevertheless reserves, like many another maiden, a brighter smile and softer welcome for those who woo her—not with a practical out-look for the dowry of her golden harvests, but well-provided lovers, who can furnish her with a fine establishment, study her every gentle or wild caprice, and follow at any cost whithersoever her beck may lead. To these, how pliant she becomes! And yet how long it has taken to convince them that her charms are worth the winning.

As a nation, we have learned this lesson slowly, but the past score of years has shown a wonderful advancement, and now, with a vast and constantly increasing number of Rural Homes, on which more or less of wealth and taste have been expended, we can also count, perhaps upon our fingers, here and there, residences and estates where reminiscences of those which travellers describe in other countries can be recalled without a blush. Prominent on this little list, is "Ellerslie," the residence of Hon. Wm. Kelly, near Rhinebeck, on the Eastern bank of the Hudson,—to which Mr. Quincy, in his Elmira address, so happily alluded, as equalling, both in position and in cultivation, "any of the estates of world-wide reputation he had ever visited in Europe."

This is high praise, but well deserved. The natural advantages of the place are even greater than we had supposed, and during the long period since it has been in the possession of Mr. Kelly, he has omitted nothing which could heighten the effect of these advantages, or add to the grace and beauty of the whole. The lawns prove conclusively that climate presents no obstacle to our attaining the same perfection of closely shaven turf here, which is so greatly admired in England. The general disposition of the grounds is a study in landscape gardening even for the most proficient in that beautiful art. The simple and convenient arrangement of the extensive conservatories and propagating houses, is not less admirable than the rarities they contain, including one of the best American collections of orchids and ferns; of the cactus family, and of variegated leaved plants; together with many specimens of more common species, noteworthy for skillful growing, or as varieties of recent introduction. Just before the door, too, there stands perhaps the largest specimen in the Atlantic States, of the *Washingtonia gigantea.*

This note was not commenced, however, with any idea of undertaking at the present time even a bare outline of "Ellerslie" and its attractions. We do think, nevertheless, that Americans should be more generally aware of the existence here of such estates, and take far more pride than they do in the fact that there *are* such among us, although the number may be small. To wander through the grounds and out-buildings at Mr. Kelly's—to roll along over the excellent roads which border the place, and notice the perfection of neatness both without and within—to visit the extensive farmstead where one of our finest herds of Short-Horns is tended with the same thorough-going care manifested in every other department—above all, perhaps, to return through the drive, which is a full mile in length from the entrance gate to the mansion, and which is probably one of the most beautiful of its kind in the country—certainly the finest we have yet seen—would possibly do more to convince an Englishman visiting America that as a people we *are* verging by degrees toward a civilized condition, than all the public edifices at Washington, or the marble fronted warehouses at New-York. Every American is careful in going to England, to include among the prominent "sights" of the journey just such lordly places as this; and when three thousand miles of water intervene between them and his own home, no notes of admiration can be too expressive of eulogy and delight. Progress is making toward a similar appreciation of similar beauties among ourselves; under the guidance of Downing, since whose lamented death ten years will have rolled away on the 28th of the present month, much good seed was sown, and its fruits, as we began by intimating, are every day springing up more freely and more freshly all around us.

☞ We have already mentioned that the Ohio State Fair for 1862, being the thirteenth annual Fair held under the auspices of the State Board of Agriculture, will be held in the city of Cleveland, O., the 16th, 17th, 18th, and 19th of September next. There are very few places situated on the confines of the State, which are so readily accessible from almost all points of the compass as Cleveland. It has become proverbial for the beauty and elegance of its streets and dwellings, no less than its citizens for hospitality. A city which has increased its population from 10,000 in 1850 to 50,000 in 1860, necessarily presents many points of interest and attraction to the visitor. The State Fair must draw thither an immense attendance from all parts of Ohio, and from other States, and the farmers of Western New-York will doubtless feel repaid for the journey by the many attractions both of the occasion and the place.

Agricultural Education.—We publish this week the very important law recently passed by Congress, donating to the several States the amount of 30,000 acres, (for each representative and senator in Congress) of the public lands, the proceeds of which are expressly devoted to "the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts, in such manner as the legislature of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." The fund thus set apart, is amply sufficient to endow, in the most liberal manner, if properly husbanded and cared for, all the institutions necessary to accomplish all that can be desired in regard to the better education of the industrial classes of our country.

The Downer Strawberry.—We have now cultivated this famous Kentucky variety three years. The first year (1860) it bore nothing. In 1861, it bore a small crop of small berries. We felt like condemning it for this latitude. The plants have been allowed to run thickly together, and to take care of themselves. This summer it has borne most profusely; it has been now ripening two or three weeks, and many more berries appear yet to ripen. The berries are of good flavor, (not the very highest, but quite respectable,) are handsome in color and form, and pick easily—they are probably too soft for marketing. If the present very favorable year is not an exception for them, they will be likely to prove a valuable sort for home use.

Fine Seedling Strawberry.—Mr. George Clapp of Auburn, N. Y., has presented us a basket of strawberries, which he calls "Russell's Great Prolific Seedling," it having been raised from seed in 1856, by Mr. Harvey Russell of Seneca Falls. It is represented as "a plant of unusually vigorous growth and very hardy, producing enormously large crops of uniform large size. The leaves are moderately large and of rather light color—fruit stalks of medium length, shooting out from all sides of the plant. Fruit very large, roundish oval or slightly conical, deep shining scarlet, with seed slightly imbedded; flesh firm with a rich and agreeable flavor. Ripens about medium season—fruit hangs long on the stalk, and retains its size and flavor to the last." The berries shown us, nearly bear out this description, and we doubt not it is worthy of extensive trial. Certainly if it will produce with ordinary culture, fruit such as that shown us, it will equal any variety sold in our market.

Annual Register for 1863.—The attention of ADVERTISERS is called to the fact that the Illustrated Annual Register of Rural Affairs for 1863, is now in Press. No similar work approaches it in circulation among reading farmers, and all that class who are especially interested in Agricultural and Horticultural Improvement. The number of pages devoted to advertisements being limited, many applications have each year reached us too late for insertion, and it is on this account, as well as in order that the work may be completed as early as practicable, that those who wish for space in this department should *send in their advertisements immediately.* Prices as in previous numbers: One page, twenty dollars; one-half page, twelve dollars; one-third page, eight dollars; business cards from two to five dollars. Advertisements will be handsomely displayed, according to the room they are expected to occupy.

Curiosity in Wool.—A. W. Hovey, Esq., of Pontiac, Mich., encloses to the Country Gentleman a very singular specimen of wool. It is black where clipped, close to the skin, then white for not quite half an inch, then black again for a little more than an inch, then white for about the same distance, while the outer end has several more narrow stripes of alternate black and white. Mr. H. says: "This sample is precisely like all the fleece of the sheep in color. The sheep is a ewe, from a pure Spanish Merino dam, brought into this State from Vermont, and by a French Merino buck. She is two years old, and was raised in this township by Robert Percy, who now owns her. From her birth, she has grown wool like this lock, sometimes black and sometimes white, but without any regular period, as you will perceive, in the changes. The skin is black, and she is now starting the black stripe again. Mr. Percy will not shear her this season, as he wishes to get two years growth of staple before clipping."

Two Illustrations of "Transmutation."—The North British Agriculturist has a correspondent at the Great Exhibition at London, who writes that among the grain shown, one exhibitor from near New Market "shows 'barley from oats.' This is not new, as in Germany the same result has been obtained. This German discovery gave rise to a still more interesting fact in natural history. A learned Professor like other learned Professors, had been at one period of his life a boy, when he was the owner of a beautiful pet lamb, and being extremely desirous that the lamb should be transformed into a little dog, he made his wishes known. Having one evening put his pet away in its crib for the night, he was greatly surprised and highly gratified next morning to find that it had been transformed during the night into a beautiful little dog. Matter-of-fact people believed, however, that his mother had made the arrangements for the metamorphosis."

Connecticut State Agricultural Society.—This Society have decided to hold their next Fair at Hartford, Oct. 7th, 8th, 9th and 10th. The grounds, which are the same as previously occupied, are much improved, and the half mile track for the exhibition of horses is very fine. At a meeting of the Executive Committee on the 11th inst., H. A. Dyer, the Corresponding Secretary, resigned, and T. S. Gold, Esq., of West Cornwall, was appointed in his place. The President, E. H. Hyde 2d, of Stafford, C. M. Pond of Hartford, with the Secretary, form a subcommittee of three to make all necessary arrangements for the Exhibition.

Dr. Kirtland's Cherries.—We acknowledge the receipt of a box containing a fine collection of seven varieties of Dr. Kirtland's new cherries, in excellent condition, from **Ellwanger & Barry** of Rochester. As there was a copious supply of each sort, we have given them a pretty thorough examination, in connection with a number of assistants. The diversity of opinion expressed in relation to their quality, shows that while there must be considerable similarity as regards their excellence, yet from the diversity of palates, they did not at all agree which was the best. The varieties were, *Black Hawk*, *Osceola*, *Red Jacket*, *Tecumseh*, *Delicate*, *Pontiac*, and *Kirtland's Mary;* and one of the committee of judges, made a list in this order as to their excellence. The next placed Delicate first, then Black Hawk and Kirtland's Mary equal, then Osceola, Red Jacket, Pontiac, and Tecumseh. A third had them in the following order:—Delicate, Red Jacket, Tecumseh, Black Hawk, Osceola, Kirtland's Mary, Pontiac; and a fourth,—Black Hawk, Tecumseh, (best sour,) Kirtland's Mary, Delicate, Red Jacket, Osceola, Pontiac. Our own list differed from all, namely, Kirtland's Mary, Delicate, Black Hawk, Osceola, Pontiac, and Tecumseh. The last we regarded as barely tolerable, while another placed it as high as second—the one preferred it for its sourness, and the other disliked it for the same reason.

The Osceola is a large fine looking fruit, and the Red Jacket is of a showy light red color, the fruit rather acid. Kirtland's Mary was largest of all, and a handsome cherry—placed nearly first by some and nearly last by others. Black Hawk had two votes as first, one as second, one as third, and one as fourth in quality. We mention this diversity to show the impossibility of one person making out a list of fruits that shall please all others.

It appears that some of Dr. Kirtland's varieties, otherwise excellent, are too tender for general value. Ellwanger & Barry write us:—"We have also fruited Powhattan, Logan, and Jocosot, but they are now gone. The trees of some of these varieties are more tender than the old sorts, but a few will prove hardy. Osceola, Delicate and Red Jacket will be hardy, and doubtless some others. Black Hawk and Kirtland's Mary are very tender. Mammoth is a noble looking tree, but refuses to bear."

The box also contained specimens of Great Bigarreau and Monstreuse de Mezel, which they think identical, in accordance with our own previous opinion. Not the slightest difference could be discerned in any respect.

☞ Among last week's despatches from Washington was the following:—

> The new Department of Agriculture, authorised by recent act of Congress, has been organized. The rooms heretofore occupied by the Agricultural Division of the Patent Office have been set apart for the use of the Department. **Isaac Newton**, the Commissioner of Agriculture, is from Pennsylvania. The appointment of Chief Clerk has been given to **Richard C. M'Cormick**, of Long Island.

Killing Docks—Lousy Cattle.—I differ from some of your correspondents on some things. One said that if we cut docks below the crown it will kill them. I tried it, but they all sprouted again. Perhaps our Indiana docks are more tenacious of life than his. Another writer says that we should not make hen-roosts above cows, as the hens make the cows lousy. I have had a hen-roost over my cows for over twenty years, and the cows have never got lousy, and the hens never get their toes frozen, as the heat of the cows keeps the place warm. From reading and observation, I believe that every animal has a louse peculiar to itself, and I believe man has got two. Gibbon speaking of the Emperor Julian, says "his shaggy and populous beard," and in a note, "but the little animal which Julian names is a beast familiar to man, and signifies love." Dirt and poverty produce lice; I never saw a fat animal lousy. In Julian's case it was dirt. Some particular state of the blood may produce lice. It appears from Plutarch that it is a disease; he says Sylla and several others died of the lousy disease. J. J. C.

North Madison, Indiana.

☞ The quantity received at tide water, of Flour, or its equivalent in Wheat, is 318,189 barrels *greater*, from the opening of navigation to July 7th, this year, than for the corresponding period in 1861. The exports of breadstuffs from New York to Europe during the week ending July 5th were 890,394 bushels of grain and 89,197 barrels of flour, being the largest shipment of flour ever made to Europe from that port in one week. Provisions in extraordinarily large quantities are also going forward.

The following table shows the comparative receipts of flour and grain in Chicago during the first six months of the past four years:—

	Bushels.
1862	20,244,570
1861	17,536,763
1860	12,399,390
1859	5,396,199

☞ Mr. J. C. **Taylor** of Holmdel, N. J., has appointed his Annual Show and Sale of **South-Down Sheep** this year for the 3d of September next. An advertisement appears elsewhere, to which it may be added that Mr. **Taylor** invites attendance on the part of all interested in Sheep, whether desiring to purchase or not, as he intends to make it a *public exhibition* of his flock as well as a mere sale. Arrangements will accordingly be effected to run *a special steamboat* on that day for the accommodation of visitors from New-York, leaving the foot of Robinson Street at 9 A. M., for Keyport and returning at 6 P. M., so that the necessity of remaining over night may be obviated. This effort to meet the convenience of the public should be rewarded by a general turn-out of South-Down men; and we may even go so far as to promise that the friends of other breeds will also derive both pleasure and instruction from a day spent in visiting the Holmdel flock.

Ag. and Hort. Exhibitions.—The Illinois State Hort. Society will hold its next Exhibition at Bryan Hall, Chicago, commencing on Monday, Sept. 8, and continuing through the week. Some five hundred cash premiums are offered, and it is anticipated the display will be the finest and most extensive yet had by the Society. C. T. **Chase**, Esq., Chicago, the Secretary of the Society, will furnish prize lists.—The Henry Co. (Ill.) Fair will be held at Cambridge, Sept. 3, 4, 5.—The Lee Co. (Ill.) Fair, is to be at Dixon, Oct. 6, 7, 8, 9.—The Bucks Co. (Pa.) Fair, at Newtown, Sept. 24, 25.—The Franklin Co. (Vt.) Fair is to be at Fairfield, Sept. 17, 18.—The Saratoga Co. Fair at Saratoga Springs, Sept. 2, 3, 4, 5.—The border towns of the counties of Oneida, Otsego, Chenango, and Madison, have united in forming the Brookfield Union Agricultural Society, and will hold their first Fair at Brookfield, Sept. 24, 25.

Merited Premium.—We observe that among the premiums awarded by the Brooklyn Horticultural Society some time ago was one to Louis Menand, for "the best and most correct *labelling of plants*." Such premiums, wherever deserved, do honor both to the exhibitor and to the Society which awards them, for scientific accuracy is a high merit.

Inquiries and Answers.

Comparative Value of Grain.—*A Subscriber* to your valuable Journal asks for a statement of the comparative value of corn, rye, oats, barley and peas, as food for horses, sheep and swine? What description of stock thrives best on rye meal? *Canada East.* [A great deal depends on circumstances, condition of the food, ground or unground; on the animal, whether taking on flesh readily or not, regularity of feeding, whether working or fattening, management, &c. The following may be taken, however, as an approximate statement of the value of each—the figures giving the quantity in pounds to be taken of each kind, to be equal to each of the others. The first column gives the result of analysis—the second by experiment or feeding:—

	By Analysis.	By Experiment.
Corn,	70	56
Rye,	58	49
Oats,	60	59
Barley.	65	51
Peas,	30	44

It will be observed that peas are richest—then rye—barley next by experiment, and oats by analysis—corn and oats nearly the same. Generally, what is good for one animal is good for another; but we have found rye meal especially excellent for horses.]

Chester County Hogs.—What is your opinion of the breed of hogs known as the Chester County Whites? I do not remember to have seen anything in their favor except from interested parties? St. Lawrence. [The Chester county hogs are an excellent and valuable breed, but being rather more liable to vary than some established breeds, it is important to select the best animals. We know of no accurate, measured, reliable experiments to determine whether these or Suffolks and Berkshires will make the most pork from a given quantity of feed—the only sure test. Mere opinions and guess-work will not, and should not settle the question.]

Harrows.—For stony land what is the best form of harrow, size of timbers, and size and number of teeth also? s. l. [A stout, double, square harrow is often made of about the following dimensions: Three timbers on each side the hinges, or six in all, each timber about 4 feet 8 inches long, 3 inches square, or 3 by 3½ inches—five teeth in each timber, or 30 in all—each tooth about ⅞ by ¾ of an inch, and a foot entire length. The strength may vary with the degree of stonyness, and the teeth may be set back a little to pass freely. Where there are few or no stone, many more and smaller teeth are more efficient.]

Sowing Orchard Grass.—When and how should orchard grass be sown—in the spring and fall—on or with fall grain, or with oats? I desire to sow it with red clover for early cutting for stock. A statement of the best time and method of sowing Orchard grass in your columns would, I doubt not, be valuable to many of the readers of your useful journal. A. K. McClure. [Orchard grass may be treated the same as timothy—sown in spring or early autumn—except that two bushels of the former should be sown per acre, as it is very light. It may be sown with autumn grain, and clover added early the following spring—or both may be sown together in early spring. Oats, unless sown quite thin, would not favor its rapid growth the first season. It forms an excellent early grass crop with clover.]

Washing Machines.—For the information of many inquirers, we state briefly the mode of operation of the three prominent machines, advertised on former occasions in our columns. The *Metropolitan Machine* is constructed on the principle of the *pounding barrel*—by the addition of elastic pounders for the safety of the clothes, and a spring for working them. It is efficient and may be used for large families. The *Union Washing Machine* we have already described; by shutting in the steam from hot water, it obviates boiling; and is worked by a crank, rolling and pressing the clothes, and is also very efficient and easy to work, at the same time it is strongly and durably made. The "*Easy Washing Machine*" is a tub set on legs, and the clothes are rubbed between two surfaces, furrowed like a common wash board, one of these surfaces being the bottom of the tub, and the other a circular board upon it, worked by a lever fixed to its perpendicular axis. This a cheap and simple machine, and is well spoken of.

Muck Swamp.—A correspondent at Cairo, gives us a full account of his unsuccessful attempts at the culture and seeding of a muck swamp, which had been previously drained. Grass, buckwheat, oats, &c, do not grow or flourish. The muck is about two feet deep. We cannot, of course, without knowing more of it, prescribe a certain remedy for the difficulty; but we would recommend the application of lime or ashes or both, at the rate of 50 or 100 bushels per acre or more, with some manure, and if the subsoil could be dug and thrown over the surface, it might answer a good purpose.

Seeding Pastures.—I have a pasture of twenty acres which I use for hogs. On seeding it with timothy and clover, the timothy seed proved to be bad. I want more clover in it. How and when can I best succeed in getting in more clover without plowing it up. I have thought of sowing on clover seed late in the fall, and harrow thoroughly. Will the seed be likely to come up in the spring and do well? c. g. t. [Harrow the pasture well with a fine tooth harrow, late in autumn—and sow the clover seed very early in spring, and roll it, if the soil will admit, to cover the clover a fourth of an inch, or a very light brushing would be useful. If a coat of rotted manure or compost could be applied before the harrowing, so as to become finely broken up and mixed with the soil, it would greatly increase the certainty of the clover vegetating, and make the growth more vigorous.]

The Homestead Law.—Would you be good enough to give all the information you possess, regarding the new homestead law, lately passed by the United States Government? Where are the public lands situated? Does the law apply to all the states and territories—to the rebel states if brought back to the Union, and what difference is there in the land of which 160 acres can be taken, and that of which only 80? Is it on account of the quality of the land, or the distance from settlements? I think quite a number of young men here would avail themselves of it, if good land could be obtained within 10 or 12 miles of settlements. g. j. *Otonabee, C. W.* [In reply, we give the following abstract of the Homestead Law which we find in one of our exchanges. It grants 160 acres of public lands to any person (almost) who will settle on them and cultivate them, except reserved lands within fifty miles of certain railroads, and of these eighty acres. There is nothing in the act, however, to prevent a single man and a single woman, each being 21 years of age, from locating each eighty acres of these reserved and higher priced lands; and they are at perfect liberty to get married the day afterward. Any person, male or female, who is over 21 years of age, and a citizen of the United States, or who, not being yet a citizen, has made legal declaration of his intention to become one, or who, being a citizen under 21 years of age, is nevertheless the head of a family, or has spent fourteen days or over in the military service of the United States, and has never borne arms against the Federal Government nor given aid or comfort to its enemies, is entitled to the benefit of the bill.]

Back Volumes of the Co. Gent.—In answer to a Wisconsin subscriber, we may state that several of the early volumes of this paper are difficult to procure, and that a complete set would therefore cost him more than his letter leads us to suppose he desires to spend "while corn is so low." But a very good substitute may be had in the bound vols. of The Cultivator. We can send the Third Series complete to him by Express, nine vols., muslin, 384 pages each, for $6.75—transportation of course at his expense.

Book on Gardening.—*L. D. I., Philadelphia.* We know of no such American work as you inquire for, embracing the culture of fruits, flowers and vegetables. We have good works on these subjects in separate volumes by different authors, but nothing like a general encyclopedia of gardening and horticulture.

Horse Hay-Fork.—Which is the best hay fork in your opinion? Do you think Beardsley's is? Do you know of any good one-prong fork? j. s. *Fayette Co, Penn.* [We have not had a sufficient opportunity to compare the different sorts side by side—all are valuable.]

Pastures.—What is the best way of getting a pasture into good grass, that is covered with ferns and other bushes, and where the principal grasses are wild? How will it do to sow grass seed, and then mow the bushes over it? r. [The way proposed will answer, taking care to repeat the process, and keep the weeds mowed down. Some may require grubbing up. The most perfect way would be to subdue the land by cultivation, and then seed to grass.]

Alden's Thill Cultivator.—Please tell me where this implement can be had? w. j. m. *Fair Haven, Ct.* [It was at one time made by Mr. Alden, at Auburn, but subsequently we think by parties in Utica, whose names we do not remember. The manufacturer should advertise his machine, if he wishes to find a market.]

WHITEWASHING FENCES, &c.

I wish to whitewash some fencing and outdoor work in the course of a few weeks, and would be glad if you would publish in your excellent Country Gentleman, a recipe for making the whitewash, and whatever remarks on its use you may judge appropriate. Such a recipe and remarks would be of much service to many of your readers in this section.

Fabius, Onondaga Co., N. Y. IRA L. SPRAGUE.

We have tried many kinds of washes, but find nothing that is not mixed in *oil*, that will endure much better than common simple *lime wash*. This is very valuable to preserve wood and keep off moss; and to be most valuable and durable the great requisites are a pure strong lime, made into rather thin whitewash, and applied at midsummer when the wood is quite dry and ready to absorb it freely. Any ochre may be mixed for coloring, and it is said a small quantity of zinc will make it harder and more durable. We could give a long list of various compositions, but we question if they would be greatly better than the above.

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[For the Country Gentleman and Cultivator.]

PRESERVING---THE BEST WAY.

Of the many improvements that have been made in domestic economy, within the last few years, perhaps there is none more useful as regards economy, health and convenience, than the new mode of preserving fruits and vegetables.

Formerly, it was considered necessary in order to preserve fruits, to add an equal weight of sugar, and stew it down to an almost indigestible mass.

By the new method, fruit of all kinds can be kept for an indefinite period, with the addition of but very little sugar—the natural taste of the fruit is not destroyed, and it is much cheaper as well as more conducive to health.

The whole secret consists in cooking the fruit through and *keeping the air from it.* There are many patent jars, some of tin, some glass, some stone; some seal with an india rubber ring which is screwed on, others use wire and others cement—but in this as with most other things, the simplest is the best.

Of the different kinds of jars I have used, I like best the common glass bottles, with large mouths, holding about a quart; they are cheaper and "as good as any."

Tin is cheap, but it will corode and the condition of the fruit cannot be ascertained. Our method of preparing the fruit, is to put it into the preserving kettle, and sweeten it with syrup, just sufficient for table use. The syrup is made by dissolving 2 lbs. of sugar in one quart of water. Heat the fruit till it is scalded through, and put it in hot. The bottles should be warmed by the fire or in warm water. Fill the bottles to where the bottom of the cork will come, and shake them slightly to get out the air bubbles. The cork should be forced in tightly, and under each one should be a stout piece of twine tied around the neck to prevent the cork being forced in when the fruit cools.

Then apply wax made of 1 lb. rosin to 2 oz. tallow. A good coat of this should be put on, and the bottles placed in a cool cellar and examined occasionally. The fruit should be ripe, but free from decay.

By this method the fruit is ready at all times for the table, and our luxuries and comforts can be greatly increased.

ST. LAWRENCE.

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[For the Country Gentleman and Cultivator.]

Sorghum Syrup---Keeping Vegetables.

Messrs. Editors—In the Co. Gent. of June 19th, page 395, is an article on the "Manufacture of Sorghum Sugar," written by me, in which an omission was made, which I would like to have supplied, as it leaves the sense very imperfectly expressed. It should read—"when the juice is ready for boiling, before warming, add one gill of milk of lime, (made by placing stone lime in a close vessel, and keeping covered till slacked; when used stir it up to the consistency of good white-wash) to thirty gallons of juice." The part after the parenthesis was omitted in print. I am willing to bear part of the blame myself, for in my haste in writing the article I omitted it, and not having time to re-write it, it was interlined.

In the same number O. H. K. of Minnesota, inquires how to preserve vegetables for winter use. We have been successful in keeping pie-plant, by stewing it till quite soft, and putting it boiling hot, into jugs or fruit cans, and sealing up with equal parts of bees-wax and rosin melted together.

String beans may be kept in either of the following ways: when of the proper age for cooking, pull and string same as usual, and spread them out thinly in the shade to dry; cook same as when green. Or if they are early enough to get ripe before frost, leave them on the vines till ripe, then gather. When wanted for use, pour boiling water over them and let them stand a few minutes, when, by using a knife to start the ends, they may be strung almost as readily as when green. I have never had any experience in keeping the other articles mentioned. S. S. Bozarth.

West Liberty, Iowa, July 7th, 1862.

PEAR SCIONS FOR BUDDING.—Scions of the Sheldon and Lawrence pears, averaging ten buds each, packed and sent by express at $1 per hundred scions, or $1 per 1,000 buds—or at half this price for orders of $5 and upwards.

Scions of the following sorts, embracing the assortment or selections from it, at $1 per 100 of 10 buds each, if sent by express, or $1 for 40 scions if sent prepaid by mail, viz., Doyenne d'Ete. Osband's Summer, Giffard, Rostiezer, Tyson, Bartlett, Bilboa, Kingsessing. Washington, Seckel, Flemish Beauty, Belle Lucrative. Steven's Genesee, Anjou, Onondaga, Nouveau Poiteau, Howell, Urbaniste, Virgalieu, Winter Nelis, Sleulle and Clairgeau. Remittance to accompany orders, and to amount to $1 each or more. J. J. THOMAS,

July 17—w2t. Union Springs, N. Y.

SHOW, SALE AND LETTING OF WEBB PEDIGREE SOUTH-DOWN SHEEP.

My 12th Annual Sale and Letting will take place on Wednesday, September 3d, 1862, at my residence, 2½ miles from Holmdel. at which time I shall offer three Two-year olds, and four Yearlings, for Rent—thirteen Yearlings for sale, mostly the get of "Reserve"—nine Ram Lambs, the get of "No. 89"—eleven Ewe Lambs, by "Reserve" "No. 89," and "Webb's Favorite Yearling." After which I shall sell eighteen Ram and Ewe Lambs, by "No. 89"—the dam pedigrees not fully known. For full pedigrees of Yearlings, nine Ram and eleven Ewe Lambs, please send for circular.

No better quality can be procured in England or America, as my stock rams were Mr. Webb's choice animals out of hundreds that he bred.

Persons coming by way of Philadelphia, will take the Camden and Amboy Railroad for Freehold, leaving at 6 o'clock. By New-York a special boat will leave foot of Robinson Street, at 9 o'clock A. M. for Key Port, returning at 6 o'clock P. M. Persons may thus avoid staying over night.

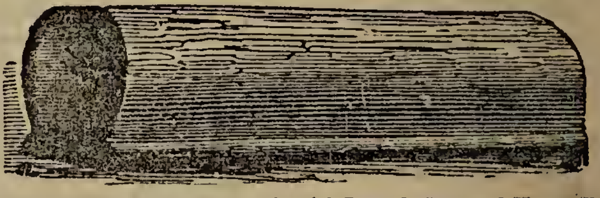
Stages can be procured at Freehold and Key Port.

Sale to commence at 2½ o'clock, P. M.

For further particulars and circular address

July 3—w1t Aug. 7—w4t. J. C. TAYLOR, Holmdel, N. J.

NEW-YORK STATE TILE WORKS,
Near the Corner of Lark & Lydius-Sts.,
Albany, N. Y.,
WM. M. BENDER, Proprietor.
GEO. JACKSON, Superintendent.



The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

N. B.—Drainage to any extent and at any place done by contract and tile furnished for the same. Ap 10—w—Jy 1—m1yr.

Also DRAINING TILE MACHINES for sale, of the latest improved Patterns. For further particulars address as above.

A NEW GOOSEBERRY AND NEW RASPBERRY

from the great West. The Gooseberry is large, smooth, prolific, of fine flavor, and free from Mildew. The Raspberry is a black cap, even larger and finer than Doolittle's Improved. Circulars sent on application. HEFFRON & BEST, Utica, N. Y.

Feb, 6—wtfm3t.

SHORT-HORNS FOR SALE.—

HEIFERS, YEARLINGS AND CALVES,

Full of GLOSTER and OXFORD blood, will be sold on reasonable terms. Apply to FRANCIS MORRIS,

July 17—w&m3mos. Throgs' Neck, Westchester Co., N. Y.

NANKIN (CHINA) SHEEP FOR SALE.—

A few pairs of Lambs and 15 Bucks of this valuable breed of Sheep for Sale. Apply to

R. L. PELL, Pellham Farm, Ulster Co., N. Y.

Mr. Theodore Smith, of Norwalk Island, Conn., from whom the subscriber purchased these sheep, says:—"I obtained in twenty months, from three ewes, seventy-two sheep, and one ewe in the flock produced twelve lambs in fifteen months—three, four, and six at a birth. The fibre of their wool is exceedingly strong and fleece heavy; their flesh cannot possibly be surpassed; it is tender, delicious, and entirely free from the strong flavor usual to mutton; their tails are broad and much resemble marrow; they are perfectly hardy, will endure our severest winters without shelter, and do not jump fences." Mr. Smith referred to Gen. Wm. Hall, President of the American Institute; Wm. Mitchell, Esq., and Joseph Hoxie, Esq. July 17—w4t.

F. & M. STRODE still continue to ship their

Pure Bred Chester County Whites,

In pairs not akin, to all parts of the Union. These Pigs are of their own breeding, and bred from the very best—chiefly from Premium stock. Terms reasonable. Address

March 6—w1y.* West Chester, Chester Co., Pa

SHORT-HORNS AND ALDERNEYS FOR SALE.

The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,

Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

IMPROVED LIVE STOCK FOR SALE.—

SEVERAL YEARLING SHORT-HORN BULLS.

BERKSHIRE PIGS FROM SPRING LITTERS.

L. G. MORRIS, Scarsdale P. O.,

May 29—w&mtf. Westchester Co., N. Y.

ITALIAN QUEENS.—

I am breeding now from the only live original

ITALIAN QUEENS IN THIS COUNTRY,

imported in March, 1861, per steamer New-York, and accompanied by my bee-keeper, Mr. August Bodmer. Price for a queen, with a few hundred workers, $7.50.

I guarantee the purity of my Queens. C. WM. ROSE,

July 3—w13t. 63 Exchange Place, New-York.

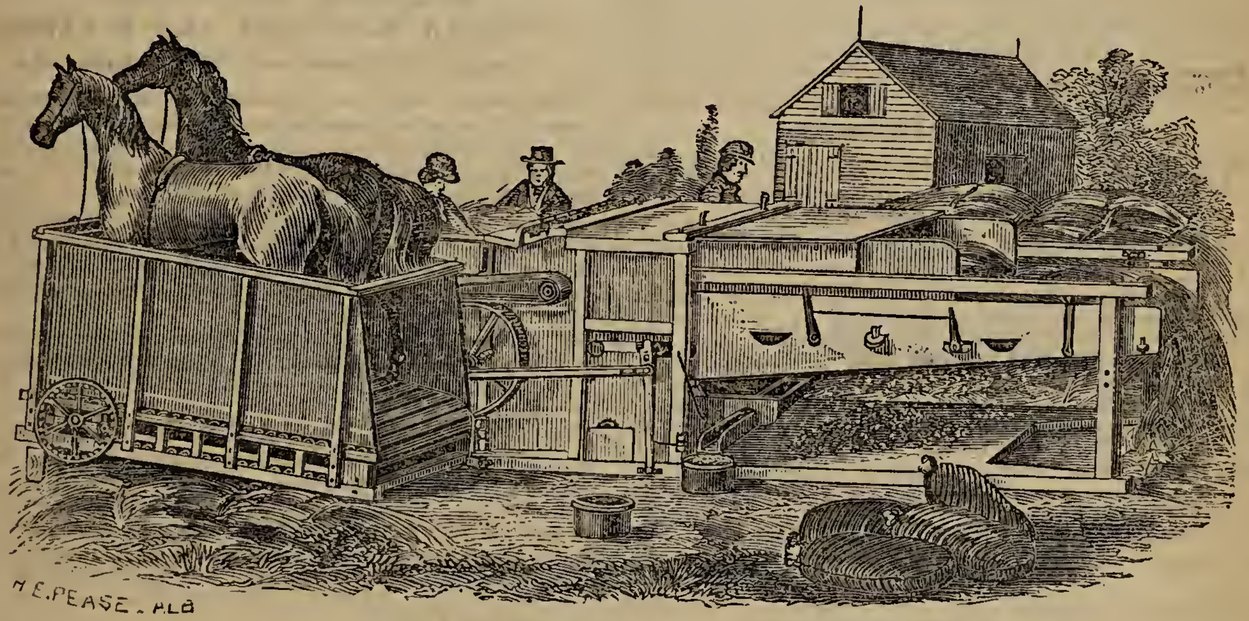
PREMIUM CHESTER COUNTY WHITES.—

THOMAS WOOD continues to ship to any part of the Union these celebrated HOGS in pairs not akin, at reasonable terms. Address PENNINGTONVILLE, Chester Co. Pa.

April 3—w1y—June 1—m1y.

AMSTERDAM AGRICULTURAL WORKS,

AMSTERDAM, N. Y.



J. M. HARVEY & SON, Proprietors and Manufacturers of One, Two and Three-Horse Changeable Railway Horse-Powers, Threshers and Cleaners, Threshers and Separators, Clover-Rubbers, Grain-Drills, Plaster-Sowers, and Agricultural Implements generally.

We would call particular attention to our Horse-Powers, which are made longer and wider than other manufacturers—which are great advantages. And in their construction, we aim to use the best of materials, and make none but the first class of work. We attach to our Powers the Self-Operating Break, which gives perfect security to the horse.

Our Threshers and Cleaners combined—which have been extensively used the past four seasons, and which have been improved for the season of 1862—will continue to be the greatest success in its line yet produced. It is easily worked with two horses. Its whole machinery is driven with one belt; has a wrought-iron sectional cylinder, and iron concave; it is changeable, delivers grain in spouts or boxes, and can be driven with sweep-powers. In confirmation of the above, we submit the

Report of Committee on Threshers and Cleaners, at the N. Y. State Fair, October, 1861.

ALBANY, October 25th, 1861.

To Messrs. HARVEY & SON, Amsterdam, N. Y.:

At your request, I herewith transmit to you copies of minutes at the recent trial of HORSE POWERS and THRASHING MACHINES, at the Fair of the NEW-YORK STATE AGRICULTURAL SOCIETY, at Watertown, N. Y. There were many other experiments and minutes taken in relation to the construction of Powers, and the operations of the same, &c., which had much to do in the making up of the final decision and awards of the Premiums, which cannot be embodied in this memorandum.

IN THRASHING WHEAT.

R. & M. HARDER'S threshed 50 sheaves in 5 minutes, 40 seconds. Clean grain from the machine, 104 pounds; grain cleaned from ground estimated 8 pounds—total, 112 pounds.

EMERY BROTHERS' threshed 50 sheaves in 5 minutes. Clean grain from machine. 142 pounds.

G. WESTINGHOUSE & CO.'S threshed 50 sheaves in 6 minutes, 52 seconds. Clean grain from machine, 143½ pounds. Grain remaining in machine. weighed 4½ pounds—total, 148 pounds.

HARVEY & SON'S threshed 50 sheaves in 8 minutes, 40 seconds, Clean grain from machine, 149⅜ pounds. Grain remaining in machine weighed 10 pounds—total, 159⅜ pounds.

Yours truly, JOSEPH E. HOLMES,
One of the Committee.

Extending the time of threshing to 10 hours, on HARVEY & SON'S machine, 3,461 sheaves would be threshed and cleaned, and estimating at the same comparative rates as made by the judges at the Fair,

HARVEY & SON'S gain in wheat over WESTINGHOUSE & CO., 822 lbs., equal at 60 lbs. to the bushel, to 13 bushels, 42 pounds.

HARVEY & SON'S gain in wheat over EMERY BROTHERS', 1,237 lbs. equal at 60 lbs. to the bushel, to 20 bushels, 37 pounds.

HARVEY & SON'S gain in wheat over R. M. HARDER, 3,314 lbs., equal at 60 lbs. to the bushel, to 55 bushels, 14 pounds.

As the saving of grain much more than compensates for the difference in time, farmers will see from a glance at the figures which machine would be the most profitable to the owner of it.

Circulars containing list of prices, and full description of each machine, with statements of their capacity for work will, upon application, be sent postage free.

Responsible Agents wanted. Address

Aug. 1—m1t. J. M. HARVEY & SON, Amsterdam, N. Y.

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THE HORSE AND HIS DISEASES.

Embracing his history and varieties, breeding and management, and vices; with the diseases to which he is subject, and the remedies best adapted to their cure. By Robert Jennings, V. S. To which are added Rarey's method of taming horses, and the law of warranty as applicable to the purchase and sale of the animal. Illustrated by nearly 100 engravings. Price $1.25 by mail, postpaid. For sale by
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ALBANY TILE WORKS
Corner Clinton Avenue and Knox Street, Albany, N. Y.

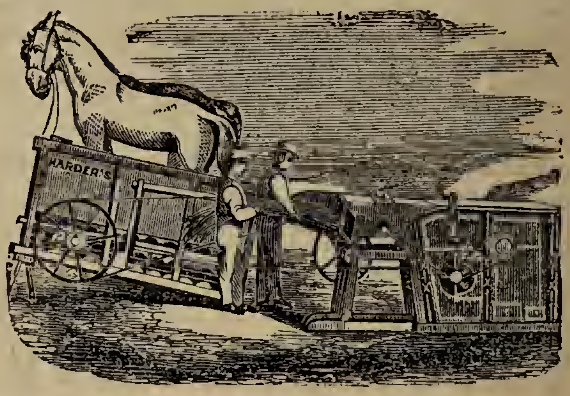
The Subscribers, being the most extensive manufacturers of DRAINING TILE in the United States, have on hand, in large or small quantities, for Land Draining, ROUND, SOLE and HORSE-SHOE TILE, warranted superior to any made in this country, hard-burned, and over one foot in length. Orders solicited. Price List sent on application.

COE'S SUPERPHOSPHATE OF LIME FOR SALE.
☞ VITRIFIED DRAIN PIPE FOR SALE.
☞ TILE MACHINES FOR SALE.
April 17—wtf. C. & W. McCAMMON, Albany, N. Y.

SHORT-HORN BULL CALVES FOR SALE.—Five, aged one week to six months. Good pedigrees and from milking stock. Price, $50 to $100 if inquired for immediately, otherwise they will be made steers. T. L. HARISON,
July 31—w2tm1t. Morley, St. Lawrence Co., N. Y.

PRINCE & CO., Flushing, N. Y., will forward the following Catalogues to applicants who send stamps: New Catalogue of Strawberries, comprising 256 splendid varieties of every class, all of which are described in the forthcoming Patent Office Report. Also Catalogues of Bulbs and Pæonies, of Fruit and Ornamental Trees and of Grapes. July 31—w&m1t.*

BUY THE BEST
AT THE
EMPIRE AGRICULTURAL WORKS.



The undersigned manufacture Changeable Endless Chain Railway

HORSE POWERS,
COMBINED THRESHERS AND CLEANERS,
Threshers, Separators, Wood-Saws, &c.

These Powers produce more power, with less elevation, and are operated with greater ease to the team than any other, requiring very slow travel of horses, being only about one and a half miles per hour when doing a good fair business, which is about 400 or 500 bushels of Oats per day, or half that quantity of Wheat or Rye.

The Thresher and Cleaner runs still and easy, separates the grain perfectly clean from the straw, cleans quite equal to the best Fanning Mills, leaving the grain fit for mill or market, and is capable of doing a larger business without waste or clogging than any other Two Horse Cleaner before the public.

☞ For price and description send for Circular, and satisfy yourself before purchasing. Address R. & M. HARDER,
July 24—w1tm1t. Cobleskill, Schoharie Co., N. Y.

THE YOUNG FARMER'S MANUAL—With Practical Directions for Laying Out a Farm and Erecting Buildings, Fences, and Farm Gates. Embracing also the Young Farmer's Workshop: giving full directions for the selection of good Farm and Shop Tools, their Use and Manufacture, with numerous Original Illustrations of Fences, Gates, Tools, etc., and for performing nearly every branch of farming operations. By S. Edwards Todd. Price $1.25, by mail post paid. For sale by L. Tucker & Son, Co. Gent. Office, Albany, N. Y.

VALUABLE BOOKS FOR STOCK GROWERS.

HORSES.

The Horse and his Diseases, by R. Jennings, V. S.,	$1.25
Dadd's Modern Horse Doctor,	1.00
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Linsley's Morgan Horses,	1.00
Richardson on the Horse,	25
Stewart's Stable Book (Allen's Edition,)	1.00
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Milch Cows and Dairy Farming, by C. L. Flint,	$1.50
Goodale's Principles of Breeding,	75
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Cole's Diseases of Animals,	50
Guenon on Milch Cows,	60
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SHEEP.

Shepherd's Own Book, 1 Vol., 8vo.,	$2.00
Youatt on Sheep,	75

SWINE.

Youatt & Martin on the Hog,	75

POULTRY.

Bement's Poulterer's Companion,	$1.25

BEES.

Langstroth's Hive and Honey Bee,	$1.25
Quinby s Mysteries of Bee-Keeping Explained,	1.00
Harbison's Bees and Bee-Keeping,	1.00

The above works will be sent by mail, postpaid, on the reception of the prices named. Address LUTHER TUCKER & SON.
Albany, N. Y.

THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY ,N. Y., SEPTEMBER, 1862. No. 9.

PUBLISHED BY LUTHER TUCKER & SON
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

TERMS—FIFTY CENTS A YEAR.—Ten copies of the CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Five Dollars.

THE CULTIVATOR has been published twenty-eight years. A NEW SERIES was commenced in 1853, and the nine volumes for 1853, 4, 5, 6, 7, 8, 9, 60 and 61 can be furnished, bound and post paid, at $1.00 each

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

EDITORIAL CORRESPONDENCE.

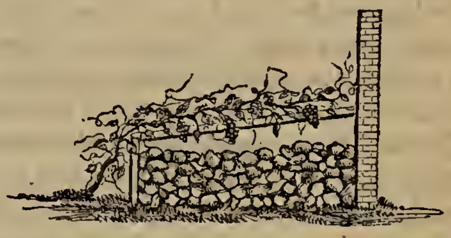
Scattered Notes of Travel.

FARMING UNDER DIFFICULTIES.—EDWARD HOWLAND of New-Bedford, took me to his farm on Clarke's Point, where he is reducing the roughest and most unpromising land to smoothness and fertility. He is widely and successfully engaged in commercial business, and occupies a part of his time in rural improvement for the purpose of health and recreation. The land before improvement is encumbered with large quantities of huge boulders, weeds and brush. Such boulders as weigh only a few hundred pounds, are drawn off on stone-boats; those from one to three tons are removed by means of the new stone-lifter (which has been lately described in most of the agricultural papers, but the inventor's name I have forgotten,) which takes them up in its huge claws and drops them where needed for farm walls. One field is thus cleared annually, leaving a good, mellow, productive soil, and furnishing fences that will be likely to last a thousand years at least. The walls are built in trenches, dug about two feet deep, preventing their displacement by frost, and are about four feet high. Common, substantial walls, cost about $2 per rod; those built chiefly of the large stones (weighing two or three tons) faced on one side, $3 per rod; while the handsomest and most substantially built, faced on both sides, cost $6 a rod. A poultry-yard, fenced with pickets, was attached to granite posts by means of iron bolts set in drilled holes—a post not uncommon in New-England. The proprietor informed me that these posts, made by his own workmen by means of drilling and wedging, cost only 15 cents each besides the drilling—the usual market price being a dollar. I did not see any thing to prevent their lasting at least five thousand years.

The surplus stone are drawn two miles to the city, and sold, the wagons returning with manure. The cost of drawing off all the stone, and reducing the soil to a fine mellow condition, is $200 to $300 per acre. Such land has produced 60 bushels of corn, and is worth the interest on $300 per acre for the pasturage of city cattle.

Fish is largely used as manure. It is bought at 25 cents per barrel, and usually scattered over the corn-fields till fermentation is fairly in progress, when it is covered with the hoe. A more perfect mode of using is to manufacture it into compost. Alternating layers formed of two inches of fish and twelve inches soil, forked over, makes a compost equal in strength to good stable manure. It acts with more power at first, but does not last so long as common manure. A barrel of fish, used either way, is regarded as valuable as a ton of average stable manure. Its effects will not last over three or four years—but obviously much longer on clay soil than light loam.

RIPENING GRAPES OVER STONE BORDERS.—MATHEW HOWLAND of New-Bedford, informed me that the sea winds often effected serious injury to his grapevines when trained to a common trellis. Observing that a vine which accidentally ran over rocks, bore well, and ripened its crop early, he has constructed a border of stone, over which the grapes are trained. The border is on the south side of the garden wall, and is warm and well sheltered from winds. The bed of stones is about six feet wide, and a foot and a half high—the front kept even with plank. From the front edge of this plank a nearly flat and sloping trellis extends to the garden wall, over which the vines run a few inches above the stone. The shelter, and the reflection from both wall and stone cause the fruit to ripen about a fortnight sooner than when suffering from exposure. The stone were round specimens about the size of one's head, and were laid loosely and evenly in the border.

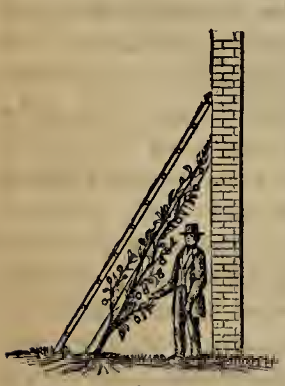


Ripening Grapes over Stone.

HORTICULTURE AT NEWPORT, R. I.—Accompanied by my friend J. M. EARLE of Worcester, I have made a hurried visit to several of the fine gardens of this city. DUNCAN PELL has a small place in the more compact part of the city, which he has improved to much advantage, and has a good collection of greenhouse plants, hardy shrubberry and dwarf pears. One end of his greenhouse was nearly covered with a trained heliotrope the stem of which was an inch and a half in diameter, and the spreading plant 12 feet high. Among other interesting objects in the collection were some very fine new double Fuchsias. The dwarf pears were in a state of vigorous growth, but although several years of age, he stated did not bear well. They furnish, however, fine specimens. Uvedale's St. Germain has grown to a weight of *two pounds four ounces.* He greatly prefers standard pears for this locality. The cool damp air of summer at this place, which renders it so desirable for a summer retreat, is not favorable to earliness, and he informed me that only a few miles distant inland there was a difference of nearly two weeks in the ripening of strawberries and other early fruits. Newport seems to resemble England in its climate more nearly than any other place in this country, by its cool summers and warm winters, and is therefore especially favorable to the growth of ornamental trees and shrubs.

The summer residence of Charles H. Russell of New-York, is one of the best kept places here. The grounds contain 13 acres, in a high state of finish, six gardeners being mostly employed. One of the novelties of the place is a fine weeping oak, the lower branches of which lie prostrate upon the ground and extend 20 feet from the trunk. The growth of peaches in pots is successfully practiced; several trees, about 4 feet high, had crops approaching maturity; among others the Early Tillotson had already assumed a deep red hue, and was nearly ripe. The gardener informed us that giving plenty of air, or by placing them outside the glass for a week or two before they became mellow, imparted a fine flavor, and they became as good as those grown on standard trees. A small but excellent grapery was well filled with ripening fruit. a number of vines in pots from cuttings made in the spring of 1861, were bearing five or six fine bunches each. Dwarf pears do well in the fruit garden, and many were profusely loaded with young fruit. They are not trained as pyramids, but more in the umbrella form, or rather in a succession of spreading and drooping whorls from top to bottom. Wilson's Albany is preferred on the whole to any other strawberry, and Hovey's Seedling next.

Another fine place is the summer residence of Delancy Kane of New-York, and is distinguished for its collection of conifers. A large curvelinear roof grapery contained a heavy crop. Peaches and nectarines are very successfully trained in a sloping position towards a wall, and covered with a single line of glass sash. The accompanying section will show the mode. The trees were several years old, about four inches in diameter at the ground, and were trained in the fan shape 9 or 10 feet high. They were fully set with young peaches, already an inch or more in diameter. The glass is a few inches outside the trained surface, and inclines against the wall, protecting from weather and insects. The whole contrivance is simple, comparatively cheap, and attended with success.



The residence of J. N. Hart is a smaller place, but containing many objects of interest. In the greenhouse there was a fine collection of the new double Fuschias, and other greenhouse plants. The long ranges of pear trees trained as espaliers were in a successful state of growth.

Pears.—J. M. Earle of Worcester informed me while here that the Paradise d'Automne had proved the most productive of all varieties at Worcester, while in quality it continued to maintain its high reputation. The St. Ghislain is more highly esteemed than formerly—the fruit improves materially as the tree advances in age from its first bearing. It ripens with the Bartlett, but the Bartletts remain untouched and uneaten while the St. Ghislains are all gone. The Beurre Clairgeau has diminished none of its high promise by later experience. It is vigorous in growth and very productive, while the fruit is large, beautiful and good, ripening at a season (late autumn) that renders it very valuable. The Alexandre Lambre is a new variety of high promise. Edward Earle of the same place informed me that for productiveness and vigor, the Buffum was nearly unequalled. A tree standing on his grounds, which he grafted when a small twig 22 years ago, is now about 30 feet high, and bore 7½ bushels in 1861, and 20 bushels in 1860. Last year's crop was much smaller than usual. The crop sells at about $3 per bushel. The great success with this tree appears to be owing to its proximity to the site of a cess pool and a buried animal—but if the same results could be obtained by repeating or furnishing a similar manuring, an acre of 150 trees might be relied on to supply an annual average crop of some 1,500 bushels, worth over $4,000—the interest on $60,000, and paying better than many shares of fancy railway stock.

A Glance at Providence, R. I.—Horticulture has not made so great an advance here as at some other places, although there are many neat gardens of moderate pretensions. One of the best is that of Alexander Duncan, the celebrated banker. The house, grounds and garden, occupy some three or four acres, in a high state of keeping. That portion of the grapery warmed with fire heat presented a fine appearance. Hamburghs with bunches nearly a foot long and weighing several pounds, already a dark purple, hung in profusion from the vines overhead. The greenhouse contained some fine specimens of the more common plants. An India-rubber tree, two or three inches in diameter, and 11 or 12 feet high, was growing vigorously with luxuriant foliage. Gov. Sprague has a new and handsome glass structure, with three wings, one devoted to green-house plants, a second to raising pine-apples, while the third is a grapery. Several vines in pots were well loaded with grapes. The Fuschias in the green-house, although not of rare sorts, were unusually fine in appearance, the short symmetrical form and dropping trusses of flowers entirely concealing the pots, and producing a highly ornamental effect. At President Wayland's very neat and inexpensive garden, the mode in which a hardy grape-vine was trained, rendered it somewhat an object of landscape beauty. The stem of a cedar tree 8 or 9 feet high, with all the branches projecting a foot or more, was set like a post and the vine trained over so as to cover it—the whole having something of the form of a pyramidal tree. When loaded with ripe grapes it must be a handsome object. I am informed by different cultivators here that the two varieties of the strawberry most valued are the Wilson and Hovey—the former being preferred to any other.

A Handsome Flower Garden.—One of the finest displays of floral beauty that I ever witnessed, was on the banks of the Sekonk river, two miles east of Providence. The Kalmia grows there naturally in great profusion, and was in full bloom, mixed as it was with the thin undergrowth of the scattered woods. Single masses of this beautiful flower, covering many square yards, were seen scattered abundantly over whole acres. The ride along the banks of the river, and through this elegant natural garden, is one that is scarcely equalled so near a city.

Neat Stables.—Some of the citizens of Providence seem to have given particular attention to the construction of neat stables, a few of which I examined. That of Alexander Duncan is kept as neat as a parlor. The floor is hard burnt brick on edge, laid as smooth as marble flagging.

The walls were grained in imitation of oak—the partitions grained plank, set in cast-iron frame—the mangers cast-iron. The rye straw for litter was spread smoothly and evenly, bordered with a braided straw carpet next the passage. My friend who accompanied me, playfully inquired of the coachman if the horses were subject to the usual wants of nature, as no barn odor nor its indications were visible. I would much prefer taking a meal from a table set in this stable, to one in a liquor-fumed tavern. The harness-room was a model of neatness,—furnished with a neat oil-cloth carpet, clock, &c.,—a room for washing harness adjoining, fitted with water-pipes and stop-cocks—and the large carriage-room in keeping. Dr. Tobey's stable was smaller, but in the neatest order—the carriage-room and office of varnished walls, and furnished with coal-stove, gas-pipes, and other conveniences like those of a room in a dwelling. The stable itself had all the fixtures for lighting with gas. In addition to most of these arrangements, I observed at the stable of J. Y. Smith, a gong in the office attached to a telegraph wire from the house, the number of strokes giving various signals to the coachman. J. J. T.

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The Agricultural and Commercial Value of Artificial Manures.

Letter to the Country Gentleman from Dr. Voelcker, Consulting Chemist to the Royal Agricultural Society of England.

It may be remembered that in an article published in the Country Gentleman under date of June 19th, we discussed the above subject at some length,—referring in the course of it to the views entertained by Dr. Voelcker, Professor of Chemistry at the Royal Agricultural College at Cirencester, England. A copy of the article was sent to Dr. V., who has kindly favored us with the reply copied below. We avail ourselves of the opportunity, in publishing it, to correct an error in our former article: We there stated that Dr. Voelcker receives a salary of "£150 per annum" from the Royal Agricultural Society of England for making analyses of manures, &c., for the members of that society at a reduced rate—which is correct, except as regards *the amount paid.* We had before us at the time a financial statement of the Royal Society, and overlooked the fact that the period covered was *six months*, instead of one year; the salary actually paid Dr. Voelcker by the Royal Society is £300 per year, for services as above, in addition to which he also receives a special grant of £200 annually, for carrying out chemical and agricultural investigations—being a total sum of £500, or $2,500.

Dr. Voelcker's letter is as follows:—

Royal Agricultural College,
Cirencester, July 2, 1862.

My Dear Sir—With this post you will receive a paper of mine on the agricultural and commercial value of artificial manures, in which I express views co-inciding in almost every particular with those entertained by my friend, Dr. Pugh. You are quite welcome to reprint those parts in your excellent paper which may appear to you desirable to be brought before your readers.

At the time when my paper was published, the manufacture of artificial manure was carried on in England to a very limited extent, in comparison with what it is at present. The trade in artificials then partook more of the character of a venturous speculation, than of that of a legitimate, well regulated business transaction, and few men of character and possessing sufficient capital and skill, were willing to embark their fortune in a new and hitherto untried undertaking.

The consequence was that at first the manufacture and sale of artificial manures were chiefly carried on in England as it appears to be the case with you at present, principally by men who had nothing to lose and everything to gain, and to whom temporary success was everything, no matter by what means it was obtained.

At that time fraudulent manures were the rule, and honorably prepared, price-worthy fertilizers the exception in our markets. To check the frauds which were practiced upon the unsuspecting farmers of England, I was one of the first analytical chemists who published a valuation table or price list of the various fertilizing constituents which are usually found in manures.

Valuations according to Prof. Way's, Nesbit's, or my own tables—and it matters little to which preference was given—fully answered that purpose. They moreover materially contributed to render the manure trade what it is now in the great majority of cases, a well regulated business, carried on by men of substance, character, and possessing scientific and commercial knowledge and enterprise.

It is only now and then that dealers in downright trashy manures can effect a sale; in the vast majority of cases price-worthy, though by no means equally valuable, manures may now be bought in almost every market town of any importance.

I do not doubt for a moment that the exertions made in your country by my friends, Dr. Pugh and Dr. Johnson of Yale College, will bring about a similar desirable change in your manure market, and for this reason feel considerable reluctance to offer any remarks, which may be wrongly interpreted by interested parties. Let me therefore again state distinctly that the valuation tables published by several analytical chemists have been of the greatest service to the farming community. I am bound, however, to state that I never regarded these tables, in conjunction with an ordinary chemical analysis, in themselves sufficient to determine with great precision, the exact price of a manure in so many £, s. and d.

In estimating the commercial value of a manure, an analytical and agricultural chemist should take into consideration many purely practical matters which are too frequently overlooked, and which can never be expressed in figures, nor indeed always in writing. Thus, for instance, the form in which the phosphates are present in a manure should be taken into account. I do not mean that only notice should be taken in an analysis whether the phosphates exist as soluble or as insoluble phosphates, for the difference in the composition, value and efficacy of these two forms is too marked to be overlooked by the merest tyro in chemistry. What I mean is that the conditions should be regarded, in which constituents usually passing under the same name in chemical analysis, occur in a manure. For instance, an analysis showing, say 20 per cent. of insoluble phosphate of lime in a manure, does not give us sufficient data for estimating the commercial value of this valuable fertilizing constituent, for, though all passing under the name of insoluble phosphates, these constituents may exist in the manure as very fine bone dust, or as coarse, half-inch bones, and in each of the two conditions it is evident bones have a different commercial value. Again, the insoluble phosphates may be present as animal black or bone charcoal, in which shape they have much less value than in the shape of bonedust, or they exist as bone-ash again, another form in which insoluble phosphates occur in manures. Still farther, insoluble phosphates may occur in artificial manures in the shape of apatite, sombrero phosphate, coarse coprolite powder, and other phosphatic minerals. Although in the form of such minerals insoluble phosphates have a certain value to the manufacturer, who converts them, by means of oil of vitriol, into soluble phosphates, they are of scarcely more utility to the farmer than sand, because they cannot be appropriated by plants, and for this reason, when present in a manure *in this shape*, are of no commercial value to to the consumer.

Nitrogen is another constituent which may be present in half a dozen or more different forms, differing widely in their agricultural and commercial value. Thus in the shape of shoddy or wool refuse it takes years before the nitrogen of the wool becomes sufficiently available for the use of plants. Scarcely more useful is the nitrogen in leather refuse. In hide clippings, and various other animal refuse matters, we find nitrogen, but while in one refuse the nitrogenous matter is readily decomposed, in another it remains for a long time inert in the soil, and therefore in the latter form nitrogen possesses less commercial value than in the former.

Again, nitrogen may exist in the shape of an ammoniacal salt, or as guano; and again its agricultural, as well as its commercial value, are modified. It is therefore unreasonable to allow the same price for the nitrogen which in different manures may occur in so many different conditions. Moreover, the state of preparation of manures greatly affects their value. Is the manure dry, or wet? Is it very fine, or coarse and lumpy? Is it uniform in composition, or not? Are the component parts of a manure and their relative proportions in a manure, really useful for the purpose for which they are recommended? What facilities are there in a particular locality to obtain artificial manures? And many similar questions require to be answered, before anything like a just estimate of the value of a manure can be given. In short, a considerable amount of commercial and agricultural knowledge, as well as great experience, and the fixed determination neither to favor producer or consumer, are qualifications quite as essential as analytical skill and ability of calculating a rule of three.

I should much regret if these remarks should have the effect of leading men to the conclusion that the analysis of Artificial Manures is of no use. Only designing or ignorant men can utter such a preposterous sentiment, and my advice to farmers is to have no dealings with manure dealers who give expression to such a sentiment, for they know, or ought to know, better.

Chemical analysis is of the highest practical utility, and just because I feel that our "manure calculators" are apt to bring chemistry into discredit, I am anxious to place the real money valuations in their right light.

Without a correct analysis not even an approximate estimate of the value of a manure can be given, but for reasons just now stated, other circumstances ought to be taken into consideration, in addition to the mere percentic composition of manure before our opinion of the value of a manure is given.

Allow me in conclusion to notice that in my capacity of Consulting Chemist to the Royal Agricultural Society of England I have had abundant opportunities of recognizing the high esteem in which chemical analysis is held by the British farmer at the present time.

Believe me, Yours very truly,
AUG. VOELCKER.

The paper by Dr. VOELCKER on the Agricultural and Commercial Value of Artificial Manures, referred to in the foregoing letter, was originally published in the "Bath and West of England Agricultural Journal," in 1855. It is very valuable and interesting throughout, although our extracts from it, at this time, must be quite brief. If occasion should offer hereafter, we may make farther drafts from the same source.

Money Value Indicated by Analysis.

The question, how much money is an artificial manure worth? is one of paramount importance to the farmer; and happily it is one the solution of which chemistry greatly facilitates. Any good analytical chemist can ascertain the exact amount of the different constituents of the manure, and knowing the market price at which they can be obtained separately, he is enabled to calculate with tolerable accuracy its commercial value. In chemical analyses the farmer therefore possesses *a sure means of ascertaining before effecting a purchase whether the price demanded is reasonable or exorbitant.*

It would lead us too far to enumerate all the reasons which could be assigned for fixing the price of some of the more frequently occurring manuring substances which follow. However useful the subjoined table may be to the practical man, considerable latitude must be allowed in estimating the real commercial value of an artificial manure; and as all articles of commerce are subject to considerable fluctuations, it follows necessarily that the price list subjoined can have no permanent value :

Table for determining the Money value of Artificial Manures.

1.	Nitrogen in the form of ammonia,	8d.	per lb.
2.	Nitrogen in animal or vegetable substances,	6d.	do.
3.	Nitrate of soda,	2d.	do.
4.	Phosphate of lime (bone earth,)	1d.	do.
	or phosphoric acid alone	2d.	do.
5.	Soluble phosphate of lime, or bi-phosphate of lime,	4½d.	do.
6.	Salts of potash,	1¼d.	do.
7.	Gypsum	1d.	per 10 lb.
8.	Lime	1d.	per 12 lb.
9.	Carbonate of lime,	1d.	per 25 lb.
10.	Magnesia,	1d.	per 10 lb.
11.	Organic matter (humus,)	1d.	per 20 lb.
12.	Common salt,	1d.	per 10 lb.

For all practical purposes the determination of the value of the remainder of the substances which are usually indicated in the analyses of artificial manures, such as oxide of iron, alumina, silica, may be entirely neglected.

It is surprising that farmers, whilst they possess in chemical analysis a sure means of having the money value of an artificial manure correctly ascertained, should more generally be guided in their purchases by printed testimonials. These testimonials are often fictitious, and, even when genuine, cannot be relied upon in estimating the real money value of a manure. Under favorable circumstances, the application of the most worthless manure occasionally is attended with an abundant crop; and as the dealer or manufacturer takes good care to select for publication only those opinions which are favorable to the sale of the manufactured article, and does not tell us how many expressions of opinion he has received, which, when published, would damage his business, it is evident that little dependence can be placed on printed testimonials.

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☞ Mr. HORACE L. EMERY, of the Albany Agricultural Works, sailed for England on Saturday last, with the view of establishing more direct commercial relations with customers in Great Britain and her Colonies, and to introduce his Machines, if possible, to more extensive use in Europe. This journey has been for some time in contemplation, and we trust its results may more than equal the anticipations that have been entertained. There is no better field for the proper employment of American energy and inventive genius.

Henry Wells' Grape House at Aurora, N. Y.

Much interest has been induced among grape-growers in the new mode of constructing vineries, described and recommended by William Bright of Philadelphia, in his recently published work on this subject. Without wishing to discuss the merits of this mode at present, we think our readers will be interested in a brief notice of the very successfull experiment made by Henry Wells, Esq., of Aurora, N. Y., under the careful management of James H. Cruise, his gardener. He has erected a small structure, 25 by 50 feet, with a curvelinear roof, and octagonal ends, surmounted by a ventilating top, the whole forming a neat and beautiful building. It contains fifty vines, now twenty-one months since they were transplanted into the vinery, and having already ripened early in summer, many bunches of excellent fruit.

In constructing the house, a cellar was first dug and walled, about three feet deep. A floor was then laid of hard burnt brick, and brick placed on edge supporting another brick floor, with a space of air between the two, equal to the breadth of the brick supporting the upper one. On this upper floor, compartments were made of brick, around the whole interior, each compartment for its vine being 2¾ feet square, and holding half a cubic yard of soil. Next within this row of compartments, a walk or lattice passes around the house. The interior portion is occupied with grapes in posts, and also with early vegetables, this space being about 10 feet by 40. A good supply of string beans was obtained the present season fit for use about the time that gardeners usually plant in open ground. Grapes in pots, four feet high, were loaded with about ten luxuriant bunches each, the vines being three years old. Some beautiful ornamental plants in pots, placed in the centre, added to the interior appearance of the grapery. A cistern beneath furnishes an abundant supply of water. Hitching's hot water apparatus for heating the vinery and the adjacent small green-house, consumes about 12 tons of coal annually. During the period of most rapid growth, early in the season, each vine evaporated about two gallons of water each 24 hours. The time required in attendance has not exceeded more than one or two hours daily, the pinching, training, &c. being done chiefly on rainy days when work could not be performed without doors. The soil for the brick boxes is a mixture of manure, bone-dust, and old decayed animal matter, all in compost several years. A large share needs annual renewing, and the labor and care are greater than that required for a common vinery; but for early productiveness and abundant supply, this far exceeds them.

The vines were planted in November 1860, and commenced their growth in February following; they are now stout and vigorous, and cover the whole interior of the glass. Each has borne and ripened several fine bunches of grapes the present season. The gardener thinks he can raise a thousand pounds next year, and the proprietor gave it as his opinion, that as a matter of dollars and cents, a good profit might be derived from such a grapery. He expects to obtain an abundant family supply, immediately following early strawberries.

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Herkimer Co. Cheese.—During the week ending July 9, 3,653 boxes of cheese, weighing 264,125 pounds, were delivered at the depot at Little Falls, for shipment east. This, at 8 cents per pound, would amount to $21,130.

SUMMER PRUNING HEDGES.

It should be constantly borne in mind, in all operations with trees, that a heavy lopping of leaves during the period of growth, always gives a more or less severe check to the growth. Some trees, as the Peach and Osage soon recover in a considerable degree from this check—with others, having less power to reproduce fresh shoots, it is nearly fatal. Osage hedges, which have been allowed two or three years to become strongly established, may receive a midsummer cutting back to thicken growth, the gain in thickening being greater than the loss by a check of vigor. It is, however taken for granted that the previous management has been right, or such as to produce a broad thick base, with a thinner and narrower upright growth; consequently, in cutting off this upper portion, at least one-half or two-thirds of the leaves are still usually left. A severer cutting back would be apt to prove nearly fatal to other hedges than those of the Osage Orange. It is the summer pruning that occasions much of the serious check or death of shoots seen on other hedges, and ascribed to "unknown and mysterious causes."

Instead of shearing off a smooth surface, so as to make hedges look like a wall, it is better to give them more of a natural and a less artificial appearance, by merely cutting back all the long shoots, and suffering the weaker and shorter to grow—giving the surface a more irregular and richer appearance. It is especially necessary to keep the top narrow, and the bottom as wide and free growing as possible.

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HARD WAYS OF DOING THINGS.

The cultivator of fruit should always bear in mind that the best way to get rid of destructive insects is to *kill* them. The various remedies, short of this course, are often more expensive or laborious than direct slaughter, and commonly inefficient at best. As an instance, we see the old remedy of tansy for the peach-grub going the rounds of the papers again. This remedy may be efficient, yet while the owner of an orchard of a thousand peach trees is setting out a thousand tansy plants at the foot of his trees, and nursing and protecting them, to say nothing of the impediment they would constantly occasion to good cultivation, he might go over an orchard of ten thousand trees and with the point of his knife destroy every grub in the bark, the external indication of which, by gum and sawdust, quickly enables him to know where to look. We know by experience that a single hand will effectually clear many hundred trees in this way in a single day; and a repetition of the work too or three times a year will keep an orchard clear, where the insects are abundant.

There are many other illustrations of the same principle, such, for example, as syringing young fruit trees with lime, tobacco, &c., to repel the curculio, the labor of such repeated application being generally greater than that of killing the insect by the jarring and pinching system. There are a few instances where insects may be destroyed by wholesale, as, for instance, the aphis by soap suds, and the currant worm by dry caustic lime; but there are also many others where it would be more profitable to hire a man to pick worms and bugs by the day, with his thumb and finger, than attempt to frighten them away by outside influences, whether it is scare-crows for birds, miasms for mosquitoes, or pellets of soft grass for pilfering boys. An active man or boy will capture singly 20 insects a minute when they numerously infest shrubs and bushes, which is 1,200 an hour, or 12,000 a day, and is more efficient than offensive nostrums, that often do more harm to vegetable growth than to thick-skinned worms, and hard shelled beetles. Where insects may be shaken into vessels of hot water by wholesale, such a mode is, of course, to be preferred. We have nearly always found direct attack the best way, and very few days' work in the aggregate will keep most gardens clear of them.

HORTICULTURAL INQUIRIES.

Pear Trees and Woodchucks.

Messrs. Editors—I set out a small pear orchard last spring, consisting of 40 standard Bartlett and 10 Flemish Beauty, all of which have lived but three. The land is a sandy loam with some limestone rock. It is good for either grass or grain. After setting them out, I drew out three loads of coarse horse manure, consisting chiefly of rye straw with which the horses had been bedded, and placed it around them for a mulching. The ground is on quite an elevation, and is greatly infested with woodchucks, which are making considerable havoc among the trees by tearing up the bark with their teeth, and I am fearful if I find no remedy for them, they will destroy most of my trees. The ground has not been plowed up within three years, but it is my intention to do so next spring. As I have had but little experience in pear culture, I would like to know what varieties of the standard are the best for market purposes, and of the dwarf also, and the time that is required for standards and dwarfs to come into bearing. It would be a great accommodation also if I could obtain a receipt of some composition, the application of which would prevent the ravages of the woodchuck.

Fishkill, July 14, 1862. A New Subscriber.

It would be much better to set out trees on land that has been reduced to a fine mellow condition by thorough and repeated plowing. Setting in grass land is a bad practice, although a heavy mulching may serve partly to lessen its bad effects for a time. Tarring the stems is hazardous at best, and often kills trees. A better way to protect from woodchucks would be to encase the stem in a broad box, made by setting either three or four boards vertically about the stem and tacking them together. Or, tying about them a mass of brier cuttings, or trimmings of an osage hedge, would probably effect the same purpose. Possibly a coating of tobacco and lime mixed, or other offensive substances, might keep off the woodchucks, but we do not know how great an abhorrence they have for the odious weed. As it would require renewing when washed off by rains, the other remedy would perhaps be best. Shooting the animals would be efficient. The best varieties of the pear raised as standards for market purposes, are Bartlett, Flemish Beauty, Howell, Sheldon, Onondaga, Virgalieu, Lawrence, Buffum and Clairgeau. *Dwarfs*—Louise Bonne of Jersey, Duchess of Angouleme, Diel, Glout Morceau, &c. Standards mostly *begin* to bear from three or four to ten or twelve years after setting out; some sorts much sooner than others; those badly managed or neglected may never bear. Dwarfs, if well managed, begin to bear in two or three years.

Propagation of Fruits, &c.

Will the wild plum, which is indigenous here, do for stocks to graft improved varieties on? (1.)—Would you recommend budding or grafting fruit trees, and why? (2.)—Will the seeds of strawberries—improved varieties, such as Wilson's Albany, Triomphe de Gand, &c., if planted, bring forth plants of the kinds or varieties as the parent plant? (3.)—Can you inform me of some work on the culture and propagation of the raspberry and blackberry? (4.)—Which is the best method of preparing the seeds for the nursery-beds, of the American Arbor Vitæ, the pine, and other evergreens? (5.) M. R.

1. The wild plum is generally used by nurserymen for making dwarf plum trees, those worked upon it not growing quite so large as on the common stock. They usually succeed well; and on light soils, where the common plum stock does not grow well, the wild plum is often very successful.

2. Budding and grafting have their several advantages, according to circumstances. Both succeed well for the apple, pear, plum, and cherry. Grafting does not answer for the peach and nectarine, while budding is very easy and successful. Budding always requires a free growing stock, where the bark will lift or peel freely; for this reason grafting must be resorted to for stunted or old stocks or trees. Nurserymen generally use budding for extensive propagation, as it is simpler, more rapid, and is performed at a time of year when other work does not interfere. Grafting is often more convenient for a few trees, obviating the necessity of watching for the removal of the ligature, and of heading back the following spring.

3. Seeds of strawberries produce plants different from the parent, with occasional or chance plants closely resembling them. The strawberry propagates itself with such rapidity, that there can be no object in adopting the more difficult mode with seeds, except for obtaining new varieties. The best mode is by crossing two good varieties; or in other words, taking the seed from any fruit of a pistillate sort, which is always a cross, some other variety having been used as a fertilizer.

4. Pardee's work on the Strawberry, &c., will probably answer.

5. The seeds loosen and come out freely when the cones become dry, and are then ready to plant.

Propagation of Currants and Gooseberries.

I wish to increase my currant bushes. How shall I proceed to do it from cuttings, and in what time of the year? I have a few of the Houghton Gooseberry bushes, and like them so well I wish to increase them. How and when can I do it and succeed? These berries do not mildew. But the English varieties are all black and lost. Bushels of them are on the bushes, good for nothing. C. G. T.

To propagate the currant, take off cuttings of the yearly shoots six inches to a foot long, cut close to the old wood, and plant early in the spring, two-thirds of the length in the earth, which should be solidly packed about them. Most of them will grow and make good plants. The cuttings may be taken off very early in spring, or the previous autumn, and kept right in damp moss in a cellar during winter. Gooseberries may be treated in the same way, or they may be layered. Thick, bushy currants and gooseberries, with young vigorous sprouts, with the earth banked up about them part way up the stems, will throw out roots into this earth, and may be afterwards separated into rooted plants, and trimmed for setting out.

A Small Hint.

By the settling of buildings, or the swelling of doors, the latter often stick at top or bottom, and are hard to open. We have seen a great deal of hard pulling and jerking, and kicking to open such doors, greatly at the risk of breaking hinges, pulling off knobs, twisting doors, and destroying patience and equanimity. The observation of a simple rule will save all this trouble and disaster: When the door sticks at the top, bear downwards on the handle in attempting to open; and when it sticks at the bottom draw upwards.

DEPTH FOR PLANTING SEED.

A great deal depends on the right depth for planting seed. It must vary somewhat with the nature of the soil, its condition as to moisture and pulverization, and other causes. If every farmer would spend one day in each year in experiments to determine the best depth, the knowledge thus gained would soon be worth hundreds of dollars to him. Five dollars worth of labor, expended in such experiments would doubtless return five thousand per cent. dividends. It would be well therefore to make the investment.

In illustration of the importance of the right depth, we mention a single experiment. A hired man was directed to plant some beet seed, but instructions were omitted as to the right depth. It was found afterwards, that, determined to do the work well, he buried the seed three to four inches deep. The error was corrected in time to have a part planted an inch and a half or two inches. The first did not come up at all; the second but feebly and sparingly, and "bad seed," and "dishonest seedsmen" were suspected. Having a little seed and a strip of spare land left, the rest was planted some time afterwards. Little pains were however taken with supposed bad seed, and it was scattered carelessly on the surface, and covered an inch or less in depth. It came up profusely; and a lesson was learned as to depth, and the character of the honest seedsman retrieved.

There is no doubt that the complaints that have been made in this journal, within a year or two, of the bad effects of *drilling in wheat*, instead of sowing broadcast and harrowing, have arisen from putting in the seed too deep. In order to investigate this question further, a series of experiments were commenced the past spring under our direction, by a careful hand, and his report below is fully corroborated by our occasional personal examination of the ground.

The following experiments were made on the depth of planting wheat, the soil a sandy loam, sufficiently moist for free vegetation—the depth being carefully measured, and the soil laid on the seed in an even stratum:—

WHEAT—planted May 21—

½	inch deep,	Came up in	5	days.
1	do.	do.	6	do.
2	do.	do.	7	do.
3	do.	do.	8	do.
4	do.	do.	10	do.
6	do.	do.	12	do.

Five weeks afterwards, there was no perceptible difference in that planted half an inch and an inch deep; that planted two inches deep was not quite so good; and so on decreasing in quality as the depth of planting increased. At six inches depth, there were but very few slender stalks.

CORN—planted May 21—

½	inch deep,	Came up in	8	days	—1 inch high in 10 days.
1	do.	do.	8	do.	— 1½ to 2 in. high in 10 days, and looking much the best.
1½	do.	do.	9	do.	
2	do.	do.	10	do.	
3	do.	do.	11	do.	
4	do.	do.	12	do.	
5	do.	do.	13	do.	
6	do.	do.	later, day not observed.		

About all the grains grew, although the deep ones were so much later in reaching the surface. Five weeks afterwards there was no perceptible difference in those ranging from half an inch to two inches in depth, but the others were of feebler growth as the depth increased.

OATS—planted May 22—

½	inch deep,	Came up in	5	days.
1	do.	do.	5	do.
2	do.	do.	6	do.
3	do.	do.	9	do.
5	do.	Later, time not observed.		
6	do.			

After five weeks, no difference was observed in half an inch to two inches in depth—quality decreased as the depth increased afterwards.

BEANS—planted May 21—

½	inch deep,	Came up in	9	days.
¾	do.	do.	9	do.
1	do.	do.	10	do.
1½	do.	do.	11	do.
2	do.	do.	12	do.
3	do.	do.	day not observ'd	
4	do.	do.	do.	
5	do.	Did not grow at all.		
6	do.			

Five weeks after planting, there was no difference in those half, three-fourths, and an inch deep; at two inches depth they were not quite so vigorous; but few came up at three inches depth, very few at four inches, and none at all at greater depths.

From all these experiments we may infer, that the best depth for wheat in mellow, moist, moderately light soils, is not much over one inch deep; for corn, one inch or an inch and a half; oats, about the same or a little deeper than wheat, and beans not over an inch, and never in any case over two inches.

We may report further in future on the growth of these plants.

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PEACH LEAF CURL.

The editor of the Horticultural Department of the Rural New Yorker, in noticing the prevalent opinion that the curl is occasioned by an aphis, says, "We have not the least idea that the curl is caused by any insect, although Prof. Harris thought it was occasioned by an aphis, and Mr. Downing agreed with this opinion." In corroboration of this view of our contemporary, we may state that we have examined the leaves of the peach with a powerful achromatic microscope, in every state from the delicate translucent organs just unrolling into existence, to the broad, thick, fully grown leaf, and have found the disease distinctly marked in all these different stages of growth, whenever the season was favorable to its development. *It appears to begin inside, precisely like the rust in wheat*, and afterwards to extend to the outside of the leaf; and from all we have yet seen we incline to the opinion that it is a minute parasitic fungus. The Rural New-Yorker says "one day of cold rain or cutting wind will produce the curl in every orchard, and those sheltered by hills and woods are found to be less exposed to the curl, and the exposed side of an orchard more injured than others. In sheltered gardens trees suffer very little." To which we may add that trees kept in a state of luxuriant growth by good cultivation are least affected.

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[For the Country Gentleman and Cultivator.]

Remedy for Worm in the Top Onion.

Accident often leads to important discoveries as in the following case:

An old lady in the neighborhood, proverbial for having a good kitchen garden, had by accident her top onion seed fall into her pork brine, and must have laid there some forty-eight hours before being discovered, and being the only package of onion seed she had, insisted on setting them out, when to her surprise every one grew, and she says she never raised better onions, or onions perfectly free from the worm.

We would suggest that the seed be soaked in milk-warm brine forty-eight hours or more previous to setting out, thereby hastening their growth by way of sprouting.

Salt composted with manure must be good—also an occasional watering with salt water.

Stanstead, Canada East. GEO. BACHELDER.

A Glance at the Farm of Ezra Cornell.

I lately spent two or three hours in a visit at this beautifully situated farm, at the head of Cayuga Lake. It lies between the Cascadilla and Fall creeks, some two or three hundred feet above the village of Ithaca, and commands a magnificent view. The whole of Ithaca is in view, mapped out in the valley below. Beyond it to the west, a broad slope of several miles is covered with many luxuriant farms;* to the south the amphitheatre is bounded by a high range of blue hills, while on the north nearly one-half of the entire surface of Cayuga Lake, for some twenty miles, is spread out below, enclosed in the sloping ridges of the rich farming regions of three adjacent counties.

This farm contains about 300 acres of excellent land. It has been occupied by its present owner only five or six years, and improvements are of course only in progress. In the present absence of the proprietor in Europe, his son takes charge of its management. The great point of attraction is the excellent herd of thorough-bred cattle. There are at present about 45 head of full-blooded Shorthorns, and 10 Devons. On looking among them, I was struck with the uniform excellence of form which they exhibited—owing, as I suppose, to the adoption of the practice of disposing at once of all poor ones. One of the best Short-Horn bulls is the Duke of Oxford, which has received two first prizes at (different ages,) from the New-York State Agricultural Society. There are some other younger animals scarcely if any inferior. A young bull calf, from a Kentucky cow, by the Duke of Oxford, is an animal of great promise. Some of the cows, in addition to their fine appearance, have high milking qualities to recommend them—one of them has given fourteen quarts at a milking. None of these animals are high fed, but receive the same treatment that good farmers generally give to their herds.

There are about 100 head of cattle and horses in all upon the place, and they manufacture over a thousand loads of manure annually, in addition to which a considerable amount is drawn from the village. The increasing crops are beginning to tell the benefits of such treatment. About 200 acres are occupied with pasture, meadow and woodland, and the remaining 100 with grain. Manure is applied both as a top-dressing to grass and plowed in for grain; the latter is regarded as most efficient or economical. Plaster proves highly beneficial. I was shown a hill lot occupied with clover, across which belts of plaster had been sown. The clover was at least double in growth, and in some places more than double; and the deep green which the plaster imparted to these belts was so conspicuous, that some of them were visible from the steamer on the lake, on my return, at a distance of two or three miles.

The construction of stone walls for fences, of the most substantial character, has been commenced. The stone is quarried on the farm, and the whole expense of quarrying, drawing, and erecting strong and smooth-faced walls, is five dollars per rod. It furnishes employment to laborers in winter. Over 100 rods of this excellent wall had already been constructed.

On my way to this farm, I called at a portion of the nursery grounds of James M. Mattison, (whose principal nursery is at Jacksonville, 8 miles distant,) and examined his fine pear seedlings. He has over 60,000 in a vigorous state of growth, many of them already a foot high, with no indications of leaf-blight on any part of the grounds. They promise to be equal to the best imported from France. The ground they occupy is a rich heavy alluvion, which has been well manured for six successive years. Those which were raised last year on similar land, proved on examination to be of vigorous, healthy, well-ripened growth, with a good supply of fibrous roots.

The steamers on Cayuga Lake have all been recently purchased by A. B. Cornell, (son of Ezra Cornell,) and during the summer season, form connections with most of the trains on the N. Y. Central Railroad by Auburn. A three hours ride on the water, from Union Springs to Ithaca, and the same in the afternoon, in returning, gave me three hours at the farm. J.

CEMENT PIPES.

J. N. Garretson inquires for the best mode of constructing hydraulic cement pipes. There are two distinct modes in practice—one, forming the pipes simply of water lime cement, with a bore through it; and the other, laying small tubular tile surrounded with the cement. In either case the water lime must be of undoubted quality, which has been proved, and the sand clean, coarse and sharp; these must be well mixed dry, and moistened as needed. The easiest mode is to use tile where it can be had, the smaller the better, an inch and a fourth bore would be just the thing. We have used an inch and three-fourths with success. This mode answers well where there is a considerable flow of water, and no much head or pressure at any place. The ditch was cut to a narrow and smooth trough at the bottom; then an an inch of freshly prepared cement or mortar spread quickly and solidly along it. The tile was then laid closely end to end, and pressed a little into the mortar. Then with a trowel the sides and top were covered with the mortar about three-fourths of an inch thick. A rope covered with cloth so as to be just large enough to fit the bore, was drawn forward through it as the work progressed, to wipe out the inside smoothly, and to prevent mortar from protruding through the cracks. After drying enough, say a few weeks, the ditch was filled with earth. It has been about two years since this pipe was laid, and it is now as hard as stone, the cement being much harder than the hard burnt tile, and would now bear considerable pressure—the first year it would not. The smaller the tile the less is the danger of bursting under a head of water, the less cement is needed, and the cheaper the construction. A moderate share of skill will make a good pipe in this way.

The other mode consists of laying a mass of cement around a plug or cylindrical piece of wood, which is drawn along as the work progresses, leaving a bore in the hardened mass. The chief care is to draw the plug gently, and at the right time to prevent any cracking of the cement. The new mode of using India rubber tubes for forming the bore to be kept inflated with air except at the time it is withdrawn, would obviously prevent cracking better than the common mode.

☞ We learn that Hon. A. B. Conger is to deliver the Address at the Westchester Co. Fair, Sept. 25.

What is it?—The Cape Cod Republican says the cranberry crop in that vicinity has been much injured by a peculiar blight. A gentleman who expected to raise 1,000 bushels, will not gather more than 300 bushels.

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* Among the rest, and distinctly visible two or three miles distant was the excellent farm of H. Purdy, who has 90 heavy acres of wheat but which I could not visit for want of time.

ITEMS IN FOREIGN AGRICULTURE.

Prepared Expressly for the Country Gentleman.

At a sale of Shropshire sheep July 21st, near Leamington, England, two rams were sold at 21 and 17 guineas respectively. Forty-seven rams were offered, and forty sold at an average of £7 9s. each.

Great Britain now pays about £250,000 a year, mainly to Normandy, Brittany and Picardy in France, simply for Eggs—the importation of eggs into that country having risen to 163,000,000 per annum, as compared with 60,000,000 thirty years since.

At a letting of "Improved Cotswold" rams, July 24th, at Marham Hall, 60 "shearlings" (that is yearlings) averaged £9 14*s*.4*d*. each, and 20 "two-shears," £8 4*s*. each. The "improvement" consists in "a happy combination of great size, heavy wool, and excellent quality, having the size of the Cotswold, with the heavy fleece of the Lincoln, and quality enough for the most fastidious."

The Russian Government has just bought of Mr. Charles Howard of Biddenham, Bedford, two young Short-Horn bulls of his breeding, also five rams, and his Battersea pen of Oxford-Down ewes, and with them twenty-three South-Downs selected at Woburn Abbey, and some black pigs from the Messrs. Druce of Eynsham, Oxon.

The Irish Farmers' Gazette gives the following as an approximate rule for obtaining by measurement the dead weight of cattle:—Take the girth in inches behind the fore-arm, square it, by multiplying it by itself; multiply that product by the length, taken in inches, from the top of the shoulder to a line perpendicular to the buttocks; multiply that product by the decimal .07958, and divide it by 576, which reduces it to stones of 14 lbs. each, 8 of which make 1 cwt.

In Ireland, up to August 1st, potatoes are reported as generally looking very well, "and the quality when dug excellent; but to see a good field of turnips or mangels is very rare—as a rule, they are very late and backward." The hay crop is said to be up to, if not beyond the average.

Among the products shown by Costa Rica, Central America, in the Great Exhibition, are samples of coffee, rice, beans, sugar, cocoa, tobacco, and cotton; tanned and untanned skins of the tapir and jaguar—also large sheets of caoutchouc, remarkable for superior quality, and balsams, gums, sarsaparilla, &c.

Agricultural Statistics are now annually collected in New South Wales—proving that, as a general rule, the younger a country is, the more highly it appreciates the importance of enterprise, and of knowing how to direct that enterprise to good advantage. The returns under date of March 31, 1861, show an average produce of wheat there, of about 16 bushels per acre, and of maize over 30 bushels. On 622 acres of vines the produce was 99,719 gallons of wine, and 709 gallons of brandy.

During the week ending July 26th, France was favored with fine harvest weather, and great progress was accordingly made in securing the crops. Consequently there was a considerable decline in the value of flour in the Paris market. Indeed the advices received during the last ten days of July, respecting the growing grain and harvest work, in Europe generally, were more satisfactory than for some weeks previously.

A large extent under a Beet crop is mentioned on the estate of a royal Russian farmer—Lieut. Gen. Prince Vassiltchikoff, a member of the Imperial Agricultural Society of Moscow, who possesses in the government of Tamboff, the village of Spassky, situated at from 20 to 50 miles from the 7 towns of the district, and upon it a steam sugar-producing establishment, and also a refinery, worked with hired laborers. The principal farm, extending over some 1,900 acres, hires its laborers by the year, and the field work is executed with the horses of the proprietor, and with improved implements. Between 600 and 700 acres have been sown this year with beet root, and the remainder with forage.

Sir Edwin Landseer has entered his public protest against the ear-cropping or other mutilation so commonly practised on dogs—as destroying the beauty of the animal, giving it an appearance which nature never intended for it—and as a matter of cruelty, not only from the pain of the operation, but also in depriving the animal of a defence which nature has given to it against the entrance of earth and sand into the ears. The entrance of these into the ears, he says, distresses the dog much, causing deafness, abscesses and cancer, and adds that public opinion should no longer "sanction such gross treatment of the animal, and that the Society for the Prevention of Cruelty to Animals should look to the practice."

During the year 1861 there were imported into London from abroad, about 50,000 beeves, 23,000 calves, nearly 300,000 sheep, and 20,000 pigs—Holland and Denmark supplying three-fourths of the cattle, and Holland alone nearly all the calves, two-thirds of the sheep, and three-fourths of the pigs.

A recent English traveller in Palestine reports to the Gardener's Chronicle, the measurement made by him of eight of the oldest Cedar of Lebanon trees he could find on a tour projected for the purpose of examining them. The circumference of each was taken at a hight of three feet above the ground, and resulted as follows:—

No. 1	29 ft. 8 in.	No. 5	40 ft. 0 in.
No. 2	36 ft. 9 in.	No. 6	33 ft. 4 in.
No. 3	28 ft. 0 in.	No. 7	22 ft. 0 in.
No. 4	38 ft. 10 in.	No. 8	21 ft. 0 in.

As to the efforts now making in other countries toward extending the cultivation of the Cotton plant, it may be mentioned that we find in a single number of one of our late foreign exchanges, five separate articles of more or less length touching upon the subject, in as many different countries, viz.: India, Algeria, Australia, Italy, and Egypt. In the last mentioned country, as well as in India, already considerable has been done, while, in the other three, cotton-growing must yet be viewed rather in the light of an experiment. It seems that for four seasons past Egypt has grown enough to average shipments of nearly 130,000 bales a year from Alexandria, (5 cwt. each,) while the amount for the past year was 150,000 bales, and a much heavier crop is looked for during the year to come. In Australia the government offer a grant of land equal to £10 per bale for every bale of cotton exported during this and the next year, after the expiration of which the premium will be reduced to £5 per bale. In Algeria we believe the French government is also offering special inducements to promote the introduction of its culture on a large scale.

A Swarm of Bees on a Man's Head.—A most singular incident occurred in Bridgewater, Mass., a few days since, illustrating the peculiar habits of bees. Mr. A. P. Benson, noticing an unusual stir among his hives, proceeded to examine into the cause, whereupon an entire swarm withdrew from their old hive, and settled upon his head and shoulders. Mr. B., without any serious inconvenience, succeeded in transferring the swarm safely to a new hive.

The Entomologist.

[For the Country Gentleman and Cultivator.]

No. 32---THE ASPARAGUS BEETLE.

The asparagus is justly characterised as "one of the oldest and most delicate of culinary vegetables, no less praised in ancient Rome, by Pliny, Cato and other writers, than at the present day." (*Wood's Botany.*) This plant grows wild in the maritime districts of the middle and southern parts of Europe, and there, in its native locality, are several kinds of insects which feed upon it, and which are pests to the gardeners of those countries. Much the most common and hence the most destructive of these insects is known by the name of the Asparagus Beetle.

Of the group or genus *Asparagus*, some two dozen species are known to botanists. About half of these are found in the vicinity of the Cape of Good Hope; the rest occur in southern Europe and the East Indies.

Being thus numerous and widely diffused upon the Eastern continent, it is rather remarkable that no plant of the asparagus kind is found in any part of America. And consequently, we have no insects here which feed on plants of this nature. Therefore, when the garden asparagus was brought here from Europe, it was able to grow with us without injury or molestation from insect enemies. It is now in univeral cultivation, everywhere through the United States, north and south. Yet neither of the insects which depredate upon it in Europe has ever been met with in this country, nor do any of our American insects attack it. Thus it has been our happy lot to grow this one valuable plant, wholly free from the annoyance of seeing it marred and mutilated by those insect depredators which give us so much vexation and trouble with about every other kind of vegetation which we attempt to cultivate.

But an insect devouring the asparagus has at length made its appearance on our shores. DANIEL K. YOUNGS, of the Queens County Agricultural Society, in a letter to the COUNTRY GENTLEMAN, dated Matinecock, June 16th, says:

> "With this I send some insects which have been eating the asparagus since the middle of May, and continue at this time in such numbers as to destroy in some localities nearly half the crop. Soon after the bugs made their appearance, they commenced depositing eggs upon the young shoots. These eggs in a short time hatch out a dark colored worm, which, as well as the parent bug, lives entirely upon the young shoots, mutilating and in most cases destroying them. As this is the first insect that has injured our asparagus, we are anxious to know what it is. * * * I hope you will give the insect your attention, as IT THREATENS TO DESTROY THIS VALUABLE LONG ISLAND CROP."

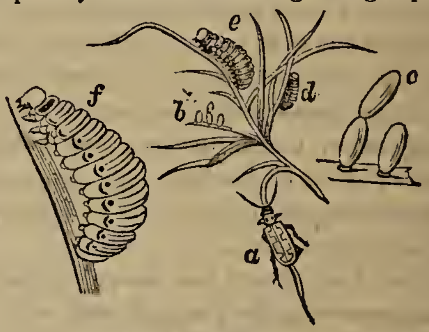
This remittance, forwarded from Albany, reached me June 24th. In the box, with slips of asparagus which had become moldy and semi-putrid, I found a dead beetle, three living larvæ, and several black grains which the microscope showed to be minute larvæ which had hatched from eggs which had been inclosed in the box and had perished. The three large larvæ, placed on a fresh slip of asparagus inserted in a vial of water upon my table, fed thereon with evident relish, until on the morning of June 30th they had disappeared—indicating that they do not fasten themselves to the plant to become pupæ, but leave it and enter the earth—which in this instance, being within doors, they would perish before they would find.

The beetle in the box, on a moment's inspection, was found to be the noted Asparagus beetle of Europe. It is a species so peculiarly and plainly marked that any one accustomed to examining insects will not be liable to mistake it. But that the reader may be more fully assured that my judgment upon this important point is correct, I may state that I have in my hands specimens of the European Asparagus beetle, received from Mr. Westwood, London, and also from Andrew Murray, W. S., Edinburgh, which specimens enable me to be positive that the Long Island insect is the same.

I will now present a brief history of this insect, with such a description of the beetle and its larva as will suffice to enable any one to clearly identify them when found upon the plant they inhabit.

The Asparagus beetle is scientifically named *Crioceris Asparagi*, its specific name having been given it by Linnæus a little over a hundred years ago. The generic name, *Crioceris*, was suggested by the horns or antennæ of some of the insects of this group, which have some resemblance to a braid of hair or a twisted cord. They pertain to the order COLEOPTERA and the family CRIOCERIDÆ. Of this genus, *Crioceris*, we have several species inhabiting the United States. One which the reader will be most apt to know, is the Three-lined leaf-beetle, (*C. trilineata*,) a common insect upon potato vines, and much resembling the yellow striped bug upon cucumbers, but differing in not having the head black.

The Asparagus beetle closely resembles this of the potato in its form and size, but not at all in its colors. In the annexed cut at *a*, it is represented its natural size, its length being a quarter of an inch or a little less. It is a beautiful insect, of a shining blue-black color, with the thorax bright tawny red, and on each wing cover are three lemon-yellow spots placed in a row running lengthwise. The wing covers are further ornamented with an orange-yellow border upon their outer sides, and the middle and hind spots have their outer ends united with this border. The under side, the legs and antennæ, are black. The insect varies in having the spots on its wing covers sometimes larger, whereby the anterior and middle spots become united togther. On the thorax, too, there are usually two small black spots, which are sometimes larger and more or less completely united into a single large spot.



ASPARAGUS BEETLE.

a. The beetle, natural size. b. Its eggs. c. Its eggs magnified. d. The young larva. e. The larva full grown. f. Full grown larva magnified.

Mr. Westwood, in his Modern Classification of Insects, from which work the figures of the above cut are copied, informs us (vol. i, p. 374) that these insects grow up and complete their transformations in a few weeks. The eggs (*b* and *c*) are oblong oval, and are placed on the plant by one of their ends, one egg being sometimes attached at the end of another.

The worms or larvæ which hatch from these eggs (see cut, *d*, *e*, and *f*,) are of a dull ash gray or olive color, often with a blackish stripe along the middle of the back. They are soft and of a flesh-like consistency, about three times as long as thick, thickest back of the middle, with the body much wrinkled transversely. The head is black and shining, and the neck, which is thicker than the head, has two shining black spots above. Three pairs of legs are placed anteriorly upon the breast, and are of the same shining black color with the head. As will be seen when it is crawling, the worm clings also with the tip end of its body, and all along the under side may then be seen two rows of small tubercles slightly projecting from the surface, which also serve as prolegs; and above these, on each side is a row of elevated shining dots like warts, above which the breathing pores appear like a row of minute black dots. It moves very slowly, and when menaced with danger, a black fluid comes from its mouth. When it is done feeding, I suppose that, like other species of *Crioceris*, it crawls into the earth, where it lies dormant during its pupa state, which in summer probably lasts ten or twelve days, when it changes into a beetle, and comes out to feed again upon the asparagus and deposit its eggs. Those larvæ which descend into the earth at the close of the season, probably remain there in their pupa state through the winter, and give out the first beetles which make their appearance the following year.

We come next to consider how we are to combat this enemy that has now invaded us, and protect our asparagus from ruin.

In Europe they have had long and ample experience on this subject. Every remedy that can be thought of, every protective expedient which human ingenuity can devise, has probably at one time or another been there resorted to, and its efficacy fully tested. And as the result of the efforts and observations of the gardeners of the different countries of Europe from time immemorial, we are told there is one remedial measure which is effectual, and one only. It is given to us in a single line of Kollar's Treatise, as in other publications, that "the only means of destroying these insects is picking off and killing the beetles and their larvæ by hand."

Those who see these insects over-running their asparagus as they do, perhaps in thousands, will be inclined to regard it as a hopeless undertaking, an endless task, to pick off and destroy every individual of the vast multitude. Reader, let me assure you,—as I can from my own experience in this remedy of hand-picking—you will find the labor far lighter and less irksome than you suppose. When this work is resolutely entered upon, you will find that you soon acquire a love of it. It ceases to be a labor, it becomes a pastime; so much so that when the last one of these vermin is destroyed, it will be with a feeling akin to regret, that, on looking over the plants, you find there is no more of this work for you to do.

And must we now have this insect to combat, this task to repeat, year after year, we and our children after us, through all coming time? The inquiry is certainly a most important one. The asparagus was brought to this country no doubt, about the time that the first European settlers emigrated hither. For upwards of two centuries, therefore, it has been growing upon this continent wholly unmolested by insects. How has this, its worst enemy, happened to follow it here now, at this late day? Probably some enterprising nurseryman or gardener in receiving from his European correspondent a choice variety of this plant, in the pot of earth in which the roots were transmitted, has unfortunately had some of the pupæ of these insects lurking, from which both male and female beetles have hatched. Certain it is, that some such contingency has occurred to bring this insect here as had not occurred for two hundred years before, and might not occur again for a hundred years to come. Having now obtained a foothold, it will undoubtedly multiply and extend itself everywhere over our country. Indeed there is the strongest probability that, like so many other insects when newly imported, this also will become vastly more numerous and destructive in this country than it has ever been known to be in its native haunts; and that the asparagus, hitherto so cleanly and inviting, we shall henceforth know only as being worm-eaten, filthy, and repulsive.

But is it not possible to exterminate this insect, and not allow it to extend itself and become permanently established in our land? I think it is. I suppose this insect is at present limited to a comparatively small district in the vicinity of the city of New-York. As it grows to maturity in a few weeks, and can subsist upon no other vegetation but the asparagus, it is evident that by keeping this plant cut down to the surface of the earth for a couple of months in summer, all the insects must perish for want of food. If no asparagus was growing except in the gardens, it would be an easy matter to keep it thus cut down. But this plant is so fully naturalized that in many places in the neighborhood of New-York I suppose it occurs wild in the field and upon the rocky shores of the sea. Every occupant of the land, however, or the children in his family, will probably know every place in his grounds where this plant, so peculiar in its structure, is growing Now if these wild plants be cut in the manner stated, say in the first week in June next year, and if with the new shoots which will start up, this operation be repeated every fortnight during two or three months, none of these insects will remain there. And by simultaneously treating the asparagus in the gardens either in the same manner, or destroying the beetles, their eggs and larva, by repeated hand-pickings upon all the plants which are allowed to grow, I am confident this insect can be utterly exterminated. I earnestly commend this subject to the consideration of the Horticultural and Agricultural Societies of New-York and its vicinity. Let those Societies co-operate with each other, ascertain how far this insect has now extended itself, appoint a committee in every town where it is present, and select an efficient man in each school district to see that the occupant of every plot of ground on which asparagus grows, is next summer on the alert to to combat and subdue this insect, and they can assuredly rid our country of this impending calamity.

East Greenwich, July 18, 1862. ASA FITCH.

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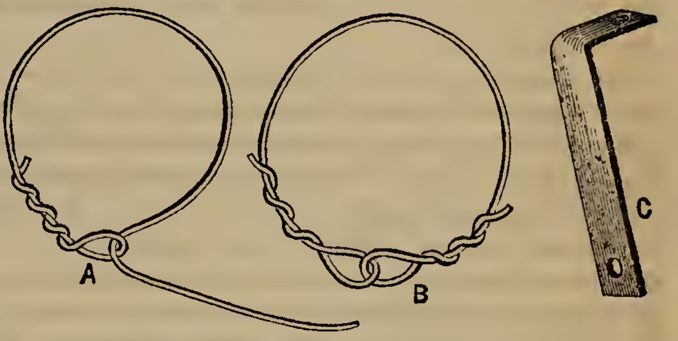
[For the Country Gentleman and Cultivator.]

Wiring Fence Stakes---Preventing Heaving by Frost.

Quercus, on p. 369, last vol., wishes some explanation of my manner of wiring fence stakes. The following figures will illustrate.



A. Loop partly made on the end of coil, being drawn to its place before cutting off. B. finished loop. C. tool used in making loop—six inches long, one-half inch wide and three-sixteenths of an inch thick, with a hole in each end suited to the size of the wire, and one end turned at right angles at its broadest side. A pair of pincers is necessary to hold the loop while coiling the end back.

While on the subject of fences, I would state some experiments I have made in making board fence. Clay soils are very apt to raise the posts out in the spring when the ground is frozen hard the preceding winter. I have adopted the following plan, which in a measure obviates that difficulty. I set my posts two feet or more in the ground, then plow on both sides three furrows or more, which will raise the earth six inches on the line of the posts. Trim up the furrows around the posts, and clean out the ditches made by plowing. These ditches, if there is descent enough in land, will carry off the water and prevent it settling around the posts, and remove the cause of the frost heaving them. I use four boards seven inches wide, one inch thick, and sixteen feet long, for a length. I put them on with twelve-penny nails for cedar posts, after being well annealed. I so space it, that when done it is just four feet from under edge of bottom board to the top edge of the top board, and any animal that you can't control by such a fence, had better be sent to the shambles.

I have taken old fence badly hove out with the frost, and served it as above described, and made it quite substantial—which otherwise would have to have been built over. HIRAM WALKER. *Mexico, N. Y.*

SHADE TREES.

As far back as our memory runs, there has been more or less effort at improving country places by the culture of pleasant shades around dwellings and by the way-side. Many dwellings have been beautifully embowered with pleasant groves, and many graceful avenues now open their vista of trees planted by the hand of man. Tall, wide spreading, graceful old trees, now the admiration and comfort of all who find a place beneath their shadow, the pride of the neighborhood they adorn, have many of these once sapling denizens of the forest now become.

Within the last half century there have been enough trees set in our New-England, to have shaded every dwelling, and transformed each of our numerous highways into a beautiful avenue. In one instance, several years since, we recollect a few individuals caused trees to be planted by the way-side, over a distance of nearly three miles. Now there is not a half dozen of these trees remaining. Most of them perished the first season, and their failure killed the ardor that set them out or their places would have been supplied. In another instance of more recent occurrence, the members of an enterprising firm bought a large tract of land, with a long line of highway through it. With a zeal worthy ot the noble cause, before a year had passed after the purchase was made, two rows of maples were planted by the way-side through their territory. Now scarcely one remains to reward them for the labor so honorably performed. Here are two instances of failure in a catalogue that might be extended almost indefinitely.

The question arises, why did not these trees live and grow? They were healthy looking trees. None but the best were taken up—straight smooth barked trees. They were set in good land. Tall grain and thick grass was growing just over the wall from their new home. The soil must surely be good. Were not the trees in fault for dying out? We have thought well on the question, and the conclusion we reach is—first, that trees are beings. They exist, grow, reach maturity—decay commences, proceeds in its work, and eventually they die. Second—they are organized beings, having not only all the organs necessary to continue life until they reach maturity, but to promote growth, protect them from disease and all the casualties to which they may be liable. They have roots to secure their position, and these roots have fibres to draw sustenance from the earth. Nature gives them in the very form and quantities they need. The top or trunk, in the forest, shoots forth in a tall mast-like form, having but few branches until it rises above the surrounding trees. Around the margin of woods, and in open lands, trees take stronger roots, and are more thickly beset with branches. These new fixtures become necessary—the roots to give a firm protection from the influence of winds—the branches to shield from storms and the burning rays of summer's sun. So nature has not only endowed them with organs of life and growth, but has given them power by which, under ordinary circumstances, they can increase the number and power of some of those organs for self-preservation.

Now the conclusion of the matter touching these failures, as we understand it, lies in the fact that most, probably nearly all the trees, that have been transplanted and lost, were taken from the forest, where their organs had been adapted to forest circumstances. As they grew in the old wood lot, they grew up tall and withy. Set out one of them as it grew, and for very limberness the wind would blow and twist the top in every direction, sometimes so far it would almost brush the ground. This top must be cut off to prevent this sacrilege of winds, and here, instead of your tree, you take a mutilation, a mere stump, to begin with. Then, these trees have grown in the woods, well shaded from wind, storm and sunshine. Their fibre is open, they are more porous, and the bark thinner and more tender than is the case with trees which have been exposed to the changes of time and season. This change from the forest to the open field tree, all comes to them at once—only they suffer the additional disadvantages of being no longer trees but stumps, with perhaps here and there a small branch shooting from their sides.

It is very reasonable to suppose that the effect of this change of locality, from shady woodlands to a position where hot, scorching sunbeams fall upon them, has a very killing influence. The bark, open and very porous, is scorched, contracts and dies. By the drying up of the bark the wood suffers and contracts, the avenues of life which nature prepared for the tree in its first home, contracts so that the life fluid is checked in its channels, and this also tends to decay.

The roots are an important part of the tree, yet how carelessly they are handled in removal! How small a proportion of the whole is usually taken up in the removal of trees, and the very portion is left in the ground, (to wit, the fibres or feeders, always most numerous at the extreme parts of the roots,) most necessary to the prosperity of the tree; very many losses have no doubt arisen from neglect in this matter. Once, in years gone by, we stood with a friend admiring some beautiful elms, when he remarked that he sent an Irish laborer to take some trees to set in his yard, and that the laborer returned with those trees, small and miserably scrawny looking things as he ever saw. He asked him why he brought such looking things to set in his yard. Oh, said the laborer, they have good roots, and if a tree has good roots, the top will make itself. These trees then showed and now show, that with good roots, the top and trunk too will find ample provision for their success.

Another cause of failure in tree planting has probably arisen from the want of adaptatation of the soil to the tree set in it. Each species and variety of the tree has its favorite soil, as every one conversant with the domains of Sylva must have observed. The maple has been the universal favorite; so the maple has been transplanted everywhere and under all circumstances, when in very many cases, if some other species had been introduced, success would have been more certain. The elm will succeed where the maple will fail. The sugar maple is most at home in a dry soil. The elm is more accommodating in adapting itself to other localities. It is often found on the margin of rivers and borders of swamps. The great elm of Pittsfield is in a gravelly soil.

Trees will more readily bear removing from a moist or even a wet soil, to a dry one, than from a dry to a moist one.

In conclusion, in our experience in tree planting we have found that trees taken from open lands have a preference over those taken from the forest, which cannot be overrated; but as our fields have but few if any trees for transplanting, we must resort to the woodlands for a supply, where, in making a first choice, we would select them from as exposed a situation as possible. If no exposed place can be found, where they can aquire hardiness, our next effort would be to obtain short trees, though they might be quite young.

It must have been noticed how well a seedling tree, which has sprung up by the fence will grow. Let such a one spring up, and take a tree of ten summer's growth and set it near by. If it is taken up as trees too often are, and the top or main stalk cut off, in fifteen years the seedling will be the largest and most symmetrical tree—even if the large tree lives, which is doubtful.

Small trees are preferable for general transplanting for the reason that you obtain more roots in proportion to the size of the tree, and what is better, the necessity of amputating trunk and branch will not exist. We are aware that this is contrary to general practice, and therefore we run against public opinion, which, when it exists against facts, is of no consequence. We speak from our own experience, and for the encouragement of those who have been unsuccessful in tree planting. Wm. Bacon.

Richmond, July, 29, 1682.

A COLUMN FROM ALDERMAN MECHI.

In taking up our copy of Alderman Mechi's "How to Farm Profitably," we discover sundry little paragraphs marked for quotation a long time ago, but for which we have never yet found the space. They contain a great deal of truth, if they are written by a city farmer:

— The history of prejudice [in agriculture as elsewhere] has always been the same, viz., resistance to innovation and disbelief of progress; but that is no justification of despair; on the contrary, the evidence of all time shows that we must fight manfully against the old enemy, and that we shall overcome him by degrees.

— The want of drainage on clays is ruinous.

— The quantity of meat made on a farm per acre determines the quantity of grain grown. It has often been remarked that amidst miserable land and wretched farming the laborer's cottage garden is like an oasis, but it receives, independently of deeper cultivation, 32 times the farmer's quantity of manure, for he knows that on his eighth of an acre of land he cannot expect a crop unless he keeps a pig to make manure.

— There are certain fixed expenses on land, whether we grow a large crop or a poor one; rent, tithe, taxes, manual and horse labor, and seed, become a very heavy percentage of charge on a minimum crop, whilst on a maximum one the expenses are proportionately diminished.

— On well laid out land, with few fences, good drainage, and good roads, there is actually much less cost of labor than on a poor, undrained farm, with wide and irregular hedges, green lanes, and choked up ditches; as most of my work is done by piece, I can estimate the difference with accuracy.

— Let him who enters on farming make up his mind to great vicissitudes in price, and in some degree in quantity and quality. It is the history of the past, and will be of the future. If the average is remunerative it is all we can expect.

— If you buy 5 per cent. too dear, and sell 5 per cent. too cheap, your farming profit is gone. Bear in mind that there are in every market men who are keen and thorough judges of the value of every article. If you are not so, you must find some good judge to act for you, otherwise you will soon fall a victim to superior power.

Iron as Manure.—A farmer once told me he manured his land with iron, and explained that it was the plow which furnished his manure. This is literally true, for there is a love between the air and the soil, which ends in a fructifying attachment if you will but expose them to each other's influence.

— The advantage of deep cultivation is particularly shown immediately over the drains, where the earth has been deeply disturbed; many people fancy that it is because it drains quicker, but the truth is that the air has more ready access to the soil.

— Management is a comprehensive term; it implies the right man in the right place, and the right thing done at the right time. In every undertaking, warlike or peaceful, it is alike essential, but particularly so in agriculture, where the fluctuations in weather render forethought and promptitude an essentiality for profit.

— Let agriculture form an honorable portion of our general education—why should it not? Let Tull and Tusser range side by side with Homer and Virgil. Agricultural education and apprenticeships for our young farmers are imperative.

— The question of what *may* be profitably produced from an acre of land, is a very important one. Professor Playfair, (a first rate authority,) has, I believe, stated that £250 can be and has been produced from one acre of market garden in one year; and we all know full well that in all gardens the produce is abundant compared with field culture. Why it is so needs no reply. "At blithsome morn and dewey eve," the crowds of men, women, and children issuing from market gardens are living solutions of the problem, and stand in charming relief to the solitary farm laborer, alone in a twenty-acre field, or scattered here and there over an extensive district, like plums in a school pudding.

— Starvation to either man, beast or plants, will reduce them to mere skeletons; abundance of suitable food, with cleanliness and warmth, will make them comparative giants. The concentration of manure and its consequences, are plainly exemplified at our flower shows, where enormous masses of flowers and foliage are produced by one solid foot of prepared earth. In a state of nature forty times the quantity of soil would fail to produce similar results. No doubt the frequent application of moisture, when requisite, assists in producing this effect; but a knowledge of this fact should stimulate us to study irrigation, and apply our liquid manure to the roots when the plant is in vigorous growth, instead of wasting it in our horse-ponds. I know and can appreciate practically the effects of such applications.

— The necessity for diminishing the fixed expense by an increased produce, is illustrated by the statement of a first-rate north-country farmer, who says that if he spends £1 per acre, or £600 per year, for artificial manures, he makes a profit—if he omits it he makes a loss. If stock is too dear, or you are short of capital, plow in green and root crops—particularly on heavy land.

— Essential Preliminaries to Profitable Farming:—

A thorough knowledge of your business, practical and theoretical.
Ability to buy in the cheapest and sell in the dearest market.
— To select the most able workmen of industrious and honest habits.
— To apportion rightly your land and capital.
— To maintain in economical efficiency the motive power, whether horse or steam.
Deep, frequent and clean cultivation.
Drainage of land not naturally filtrative.
Shelter for stock.
Efficient machinery and farm implements.
Ample [and judicious] use of purchased food and manures.
Rigidly correct farm accounts, posted daily from the cash book and journal.
Estimates of the cost and return of each crop in detail.

— Before I hired a farm I would take with me a laborer, and dig a hole in every field, to the depth of two or 3 feet, that I might know the character of the subsoil, for herein lies the prospect of your success or failure. The agricultural pie-crust, or plowed soil, to the depth of 5 inches, always looks pleasant enough and dark, but inside the pie you will too often find a most miserable contrast, inconceivably at variance with the deceptive surface which has been so long cultivated and aerated. There is nothing more instructive than the contents of a 5-feet drain cut through a field. Mere contents, when exposed to daylight, appeal forcibly to agricultural common sense with reproachful truth. It is in that 5 feet of subterraneity that you must look for your agricultural profit or loss; and yet I have seen many farms hired without a spadeful of earth being moved or examined; and I have seen many farmers, in a very brief period, leave farms so hired, minus their capital.

LAMBERT WHEAT.

Editors Co. Gent.—I send you a sample of weevil-proof or Lambert wheat, grown by myself. I have grown two crops of it. The wheat is from three to five days earlier than the Mediterranean, smooth head, small blade and straw. The straw is softer than smooth-headed wheat generally. Its earliness renders it less liable to be affected by the midge. The hull of this wheat is double, so that the midge fly does not pierce it, in depositing its eggs. Thousands of heads have been examined by different persons, and I have never heard of a weevil being found in it.

Last year I had ten bushels of this wheat sowed side by side with the Mediterranean, in the same field. The Mediterranean was very much injured by the weevil, while the Lambert was entirely free from the little pest. One bushel to the acre of this wheat will yield 20—some say 25 bushels. F. C. W. *Columbus, Ohio, July 13th.*

The heads sent are beardless and considerably resemble in external appearance the whiter heads of the Soules wheat. The grains are rather larger and darker colored than the Mediterranean as grown here—the interior is more compact and will probably make as white flour. As in the Mediterranean and other varieties there is an inner and outer chaff, but they are slightly thicker in the Lambert, and separate more readily. A very favorable notice of this variety was published in the Country Gentleman, vol. xvi. p. 218, from an anonymous correspondent, from which it appears that it has been in cultivation over ten years, and if valuable will make its way and become extensively introduced.

◆

To Make a Cheap Water Trough.

Saw off a hollow log, say ten or twelve feet long, and nail boards firmly over each end. The ends of the log should be sawed true, so that the boards will fit water tight. On the upper side of the log, cut holes with a narrow axe, so that cattle can thrust in their noses and drink. These holes may be about three feet apart. Scrape out the rotten wood from near the ends, on the inside, and apply a good daubing of pitch or rosin (resin) mingled with an equal amount of linseed oil. In case the trough is very much decayed, procure a quantity of brick clay, and work it until it is about of the consistence of putty, and fill each end with clay.

I have made cheap troughs in this way, that would last several years.

◆

Pure Water for Stock.

A good draught of *good* water, is, probably, as refreshing to beasts as it is to people. But, in the month of August, nearly all domestic animals suffer far more than we imagine, for want of good water. Sheep will thrive far better if they can have access to pure water. Teams will endure the heat far better if they can have a plenty of clean pure water; and if milch cows must drink stagnant water wherever they can find it, how is it possible for them to give their usual flow of *good* milk. It is impracticable for them to do it.

Some people allow water to stand in troughs, day after day, many times, and compel their animals to drink it all up. Did such people ever drink water from an old dirty slop pail, after it had been allowed to stand in the sunshine for two or three days? Let them try the experiment of drinking such water, and wait for the result; and then they will be prepared to express a correct opinion, whether or not such water is as good for stock, in the sultry days of August, as pure cold water would be.

Water troughs and water tanks should be cleaned frequently, during the hot days of August, and fresh water pumped into them several times during the day.

Milk cows require a vast quantity of pure water in hot weather, in order to produce their usual flow of good milk.

DAIRYING IN BROOME COUNTY.

Mr. C. H. Treadwell, a farmer at Pleasant Hill, four miles southeast of Binghamton, some time ago contributed to the Franklin Visitor an account of his dairy operations for the season of 1861. His farm contains ninety acres, (70 cleared,) and is rather a new farm—the first clearing being made on it about twenty-one years ago. His dairy consisted of eleven cows, including a two-year old heifer. Mr. T. says:—

We have sold 2,218 lbs. butter at 19 cents per lb.,	$421.42
We have used and retained for use 360 lbs., which, at 19 cents per lb., would add $57 to the above,	57.00
Dairy to be credited for pork	62.35
Deacon Skins,	4.00
Calves,	12.50
Total credit to dairy,	$557.27

We pack our butter in jars, and either sell the jars with the butter, or have them returned.

My income from the farm was as follows:

Cattle sold,	$156.00
Potatoes raised,	21.00
Buckwheat raised,	16.40
Corn, beside fattening pork,	9.00
Hay raised.	208.00
Pork, beside that credited to the dairy.	19.25
Total credit to the farm,	$429.65
Total receipts from dairy and farm,	$986.92

Sold for cash to the amount of $643.77. The dairy foots up the best this year it ever has. Last year we made 2,432 pounds from twelve cows. Last year I raised more grain, the total produce amounting to $1,013.27. But the blessings that crown our industry every year, are such as to furnish us a happy thanksgiving day, as often as the sun rises.

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[For the Country Gentleman and Cultivator.]

REMEDIES FOR CRIB-BITING.

Editors of Country Gentleman—In a former number of your paper, there was an inquiry for the cure for a crib-biting horse, and I have looked for answers, and as yet have seen but one, and that was to buckle a strap around the neck. I owned a crib-biter once, and was told to try the strap, and the effect was to cut the mane out, but the horse would crib when the strap was off and almost as often when on—keeping in a stall without rack or manger, and taking the food to the horses in boxes at feeding time, or soaping the parts thickly with soft soap on the spots he uses for cribbing, and in fact all parts reached by his teeth.

A horseman told me that the front teeth of a horse that cribbed, lapped over each other or pressed together so as to create pain, and if they were filed apart it would cure him of cribbing. I never tried it, so cannot vouch for its efficacy, but I give it to you for what it is worth.

I send you four heads of timothy I pulled one day from a bunch of about twenty, apparently from one seed, and all were about the same length. They are not samples of what I raise, but should like to. James Thompson.

Rose Hill, July 21, 1862.

The timothy heads enclosed were of large size, and seven inches in length.

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Rice Pudding.

1 quart of milk; 1 tea-cup of rice. Boil the rice and milk together until done; then put in the yolks of three eggs and enough sugar to sweeten it. After it is taken from the oven, make a frosting of the whites of the eggs—spread it over the pudding, and place it in the oven long enough to become a light brown. I think the rice pudding is better *cold* than warm. K.

◆

Sponge Cake.

10 eggs; 1 pound of flour; 8 ounces of sugar; 1 lemon. The flour must be well heated. Bake in a hot oven. K.

[For the Country Gentleman and Cultivator.]

GRAPE CULTURE IN KANSAS.

Kansas, July 30, 1862.

From time to time, dear Country Gentleman, I see some querist enamored with the life of a farmer, seeking knowledge through your columns.

It is as true now as when Horace wrote his Satires, "that no one lives content with his condition, whether Reason gave it him, or Chance threw it in his way."

Inasmuch as the querist will not heed Horace, he must be answered, and possibly, in the multiplicity of replies, he may find something worthy his perusal. Therefore, I cast in my mite.

I cannot boast of much experience in either the culture of grapes or the rearing of sheep; hence my remarks must be based on observation mainly.

Firstly, I would advise a new beginner to devote his energies to the culture of grapes or the rearing of sheep. Secondly, I would recommend Kansas, all things considered, as one of the best, if not the best field for the novice, who is limited in means.

Now for the reasons for the faith which is in me. As to grapes, I assert that there is no grain, no vegetable, no tree, no bush, and no vine so easily managed and so certain of returning a fair recompense for the labor expended upon it; and few fruits of any kind are so cheaply brought into bearing. A person who has never tried farming will find the sowing of grain, the planting of corn and vegetables, with the after plowings and hoeings innumerable, are far more pleasant in theory than agreeable in practice; nor is skill therein so easily acquired. He may commence with the resolve that no weeds shall obstruct the rapid growth of his crops, but unless far wiser than most men, or possessed of ample means, mid-summer will find his fields choked with weeds, and himself half-crazed. Possibly, he may begin to doubt whether a farmer's life is so very interesting and delightful.

I doubt whether a man of small capital, say less than $2,500, can hope to earn a comfortable living, as a tiller of the earth, without great trouble, unless a thorough practical farmer, or aided by high prices for produce, raised on new and rich land.

I think the fruit grower, starting equally ignorant of the practical details, may more readily gain a mastery of his business, and if near any good sized town is certain of making a better living and with less hard work. The first year he will have to raise vegetables and other farm produce to assist in defraying expenses; but the second year his small fruits will yield some revenue, and together with his dwarfs, will pay well the third year.

If one reads of trenching three and four feet in depth, of fertilizers, phosphates, superphosphates, &c., &c.; of the Thomary system, of the bow system, of Bright's renewal system, of borders and trellises, of *the* Delaware—"the *only grape* to plant"—and consulting a wholesale catalogue finds it advertised at $75 per hundred, for No. 1 single eyes, what wonder that *his* eyes open, and he shuns grape culture as the leech that will soon steal away his little capital. But if some one should say to him, "my dear sir, don't be frightened; this is principally paint, put on to terrify green-horns, and catch suckers; wait a minute and I will rub off a little for you;" possibly he might listen. Then would I say unto him—never mind the books and the horticultural society reports for the present; but have that hill-side pasture plowed up, then cross plow with the largest and deepest running plow you have, then subsoil it. Having done this in the fall, and purchased your Catawba one year roots, and Isabella ditto—1815 to the acre and for $15 per 1000—heel them in for the winter in some dry and shaded place. If you intend to sell the grapes only or principally, buy mostly of Isabella; but if you wish to sell the grape juice or make wine, then have five-sixths of Catawba. Do not begin with more than two acres. As soon as frost is out in the spring, have deep furrows plowed six feet apart, and set your vines four feet apart in the furrows; being careful to spread out the roots well. For fuller directions see Dr. Grant's Illustrated Catalogue, price three cents. Now read your works on grape culture, and don't be afraid of cutting off the laterals too much. When your vines have made a growth of three feet, go into the woods and cut some sticks, and place one to each vine, and fasten the growing cane to it—you can do so easily with green wheat straw, or better with willow twigs. The third year your vineyard will bear and should yield you thereafter an income of at least $250 per acre. Of course the second year you layer your vines and so increase the size of your vineyard to five acres, which is all one man can tend well. Having brought your Catawbas into bearing, buy some of the more costly sorts, as you can now afford to do, and try them. Then tell me if there is not more pleasure, less hard labor and more profit in grape culture than in any other tillage known to man.

For the grape, Kansas, or a portion of it, is peculiarly fitted. Our soil is light and rich, and our climate dry—we do not need to drain or manure our land. Along the bluffs of the Missouri, in the counties of Doniphan, Atchison, Leavenworth and Wyandotte, and along the bluffs of the Kaw, in the counties of Johnston, Douglass, Shawnee, Waubonsee, &c., are thousands of acres of cheap land, unequalled, I believe, in the world, for the culture of the grape—my own preference is for the bluffs of Missouri, where I have an incipient vineyard. There are several vineyards started in Doniphan and Leavenworth counties, and have surpassed the expectations of their owners, in the rapidity of their growth, the excellence and productiveness of their fruit, and their freedom from disease. One of the owners, an old French *vigneron*, tells me he never saw vines do so well in France; he is an intelligent and educated man.

Good land may be purchased in these counties, at prices ranging from $2 to $20 per acre, according to its nearness to some embryo city; and cultivated land from $5 to $25 per acre, according to improvements or nearness to the cities aforesaid.

St. Joseph and Leavenworth city furnish a ready market for all grapes, and St. Louis for all wine or grape juice that this section of country can yield for several years to come.

Of sheep I know less. Sheep can be purchased in Missouri for one dollar per head, and can be kept on our prairie grasses from May to December; and the prairie hay cut in July will keep them, with moderate shelter, during winter. The range and grass cost nothing. The shelter will cost less here than in New York or New England; and the land may be taken under the homestead bill in nine-tenths of the counties in Kansas. In southern Kansas they pasture their sheep near home in spring, summer and fall, and drive them into the border of the Indian country in winter; they have little or no snow during the winter. Even here, in latitude 39 deg. 40 min., we have not had over two inches of snow each winter, four out of six winters.

The wool may be sold in St. Joseph or Leavenworth city, or shipped, at a cost of two cents per pound, to New York city.

We Kansans regard our State as possessing great advantages for the fruit grower and stock raiser, but we know no other state can surpass us for wine-growing, and few equal us for the rearing of sheep. Kansas.

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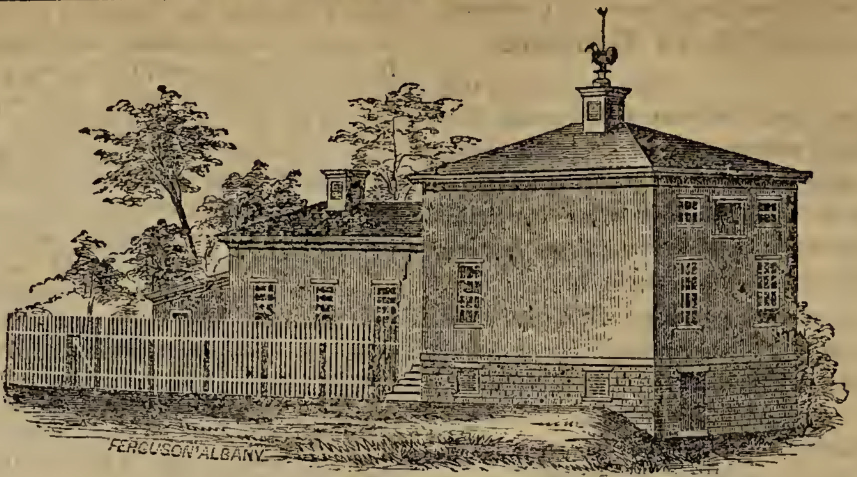
The Aphis in Cayuga County.—You inquire of your subscribers for information respecting the Aphis. Last year, on or about the 1st of August, it made its appearance on late wheat and oats, in moderate numbers, sufficient however to injure wheat badly. It has now been upon our fields two weeks in immoderate numbers, say a thousand upon single heads, more or less—most numerous upon wheat, even where growing side by side with oats. Last year the reverse was true. I shall be happy to inform you if they do not destroy my crop entirely.

Ira, Cayuga Co., July 30. S. B. LOOMIS.



THE POULTRY HOUSE OF W. H. HERRICK, Esq. OSWEGO.

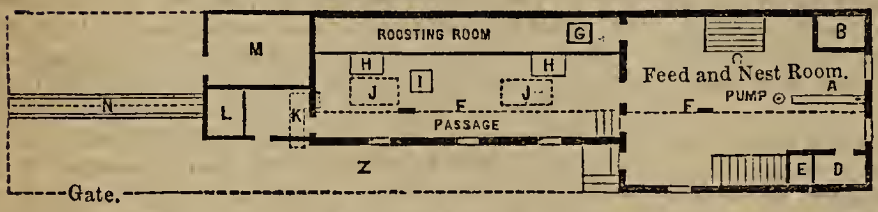


Fig. 2.—Ground Floor.

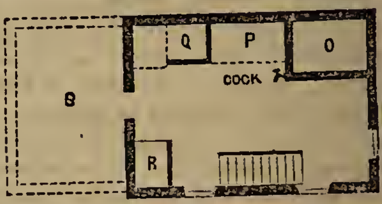


Fig. 3.—Basement.

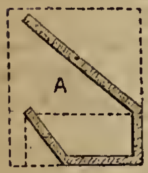


Fig. 4—Section at A.

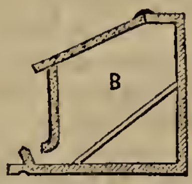


Fig. 5.—Section at B.

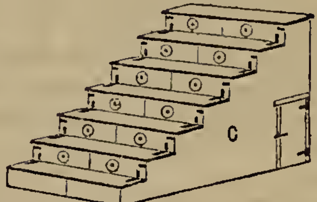


Fig. 6.—Section at C.

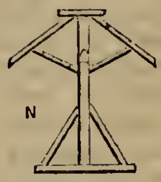


Fig. 7.—Section at N.

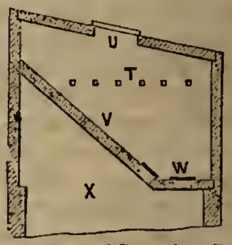


Fig. 8. Sec. of Roosting Room.

DESCRIPTION AND REFERENCES TO ILLUSTRATIONS.

A. A.—Water trough and section.

B. B.—Feed-box and section. Holds 50 bushels.

C. C.—Nests and section. Nest on each side of the hole, being two for each entrance, which allows the hen to be out of sight while on the nest. The cover lifts up, for the purpose of taking out eggs, &c. The nests are so constructed as to be taken apart, by loosening the hooks, each one being the same as a drawer in a bureau. They can be taken apart, cleaned, oiled, and put up again in ten minutes or less. There are 24 nests in this set. Under the nests is a *prison*, where hens wanting to set are put for three days *without food or water*, which effects a perfect remedy. I claim this to be the *best plan for nests extant.*

D.—Tool closet.

E.—Ventilator from basement, and also used to send down hay from loft.

F. F.—Slat partitions.

G.—Trap door and spout leading to compost vault.

H. H.—Openings to roosting room.

I.—Ventilator.

J. J.—Openings in inclined floor under sky lights, to admit the light to lower floor, which warms in winter and keeps sand dry.

K.—Passage way from house to yard.

L.—Pile of burnt oyster shells, bones, &c.

M.—Pig pen.

N. N.—Covered shelter in yard, for fowls to use in either wet or sunny weather.

O.—Stone cistern in basement.

P.—Feed.

Q. R.—Cow Stalls.

S.—Manure and compost vault.

T.—Roosts.

U.—Sky light, ventilator, &c.

V.—Inclined floor for droppings.

W.—Trap and spout to the vault

X.—Sand bottom.

Z.—Yard—all sand and ashes.

Poultry Keeping on a Large Scale.

W. H. HERRICK, Esq., of Oswego, has kindly complied with our request to furnish plans and details of his poultry house, which are given above, together with the following letter on his system of management:

EDS. CO. GENT.—I keep from 100 to 200 fowls, mostly of the Black Spanish breed, and keep them confined the year round, but disease is not known among them, and I can assure you that they do full as well as those kept by others who believe that a fowl cannot do well unless they are *kept scratching*. My yard is only 25 by 60 feet, filled 12 inches deep with leached ashes and fine sand. I have a large box containing some 30 bushels of burnt oyster shells and bones, which the fowls have free access to, and when the top becomes too dirty, I take it off and put it around my grapevines. My gardener raises 600 head of cabbage, annually, which is fed them through the winter, and in summer he gives them lettuce, all they want. I have a contract for ten beef heads weekly, and give them plenty of sour milk, in addition to all of which they have *free access* to a mixture of corn, oats, wheat and barley, which is kept in a bin holding some 40 bushels, so constructed as to *regulate itself*, and not allow the fowls to waste a grain, or scratch in it. My watering trough is also so constructed as only to admit the heads of the fowls, and is always full of *pure clean* water, which is of more importance than anything else in keeping poultry healthy.

A barrel of lime, a bucket and a brush, are indispensable articles in a poultry house, and should be used every *rainy* day (and oftener during such a drought as we have had lately,)—whitewashing everything but the floor, and using the lime *dust* on that. But *wash the floor* first. I have tried all your *vermin preventives*, and everybody else's, but never succeeded in keeping my fowls free until I found a remedy by experimenting:

The nests are so constructed as to be all taken apart in two minutes; they are perfectly smooth inside and out, and about once in every two months I have them taken down, cleanly washed, and then thoroughly coated with *common whale oil*, and I have never yet seen a single *louse* near them, nor can one be found around my premises. The oil we apply with a common brush, and it can be relied upon as being a *sure preventive against vermin on fowls.* W. H. H.

BALLOON FRAMES FOR LARGE BARNS.

I want to build a barn next year three stories high, and length and size of barn in Rural Register 1862, page 138, fig. 16. I wish to build on the balloon frame principle as a saw mill and my timber are within 300 or 400 yards of the place of building, and the cost of erection would be much less than by common frame. But can such a barn be built on the balloon principle? If so, should the studs be sawed the full 24 feet long? I want the building of that height. How many should be put in the sides? How should the thrashing floor be put in?

On page 194, fig. 24, same Register, Geo. E. Woodward frames the gallows frame with mortice tenon and brace. Would it not be better to dispense with these by starting one long brace in the centre of the end, letting it into the studs, and running to the top of the building? Two such braces could be put in.

Would collar braces be sufficient to support the roof? If insufficient, will the storage or convenience of the barn be affected by the joists. Will not Mr. Woodward give us some explicit directions how a large barn, like the one in question, on the balloon principle should be built, giving suggestions as to size of sills, joists, studs, etc.?

What changes would you recommend in barn, page 138, when it is to be used exclusively for a dairy barn, carriage sheds and horse stable being already erected, and my farm not at all adapted to grain raising? I wish to go into the dairy business extensively, having a farm of 240 acres suited to it, and I wish to erect a barn as large as the one in the Register, for the exclusive purpose of the dairy. The question with me is how to build it so that it shall be perfect and convenient in every respect—a building such as L. F. Allen says of his barn—one in which one man can do the work of two elsewhere.

Having no experience in dairy buildings, I rely on older heads and their works. I ask directions from Mr. Woodward because not a single carpenter in my acquaintance here has any practical knowledge of balloon frames, and information from you because I have never seen a dairy barn. Please let us hear through the Country Gentleman, the information I desire.

I would also state that I raise a great many roots. Where, in this barn, should they be stored? I use sawdust exclusively for litter, but expect hereafter to combine muck with it. Where should these be placed before using to be most convenient? I wish to save and accumulate all my manure, and use this muck for that purpose.

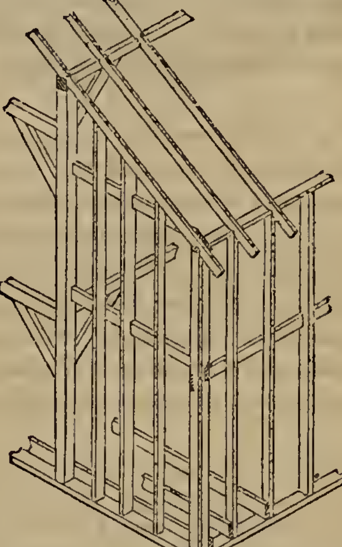
Harrison Co., O. R. S. LACEY.

It is a great advantage on every farm if a portion of grain can be raised, the straw being valuable for litter and manure making, and the grain for meal to mix with roots. In that case no alteration need be made in the plan in the Register. But if grain is not admissible, little change would be necessary except in omitting the granaries or a part of them, and occupying a part of the upper floor for storing hay. The horse stalls may be changed to cattle stalls, and more space may be given at M. for storing muck to keep it dry, and for roots, the latter discharged through a trap door in the passage above, and covered with straw. In answer to the other questions, we have been kindly favored with the following reply by Geo. E. Woodward of New-York, who thoroughly understands everything connected with balloon frames, and who contributed the excellent article on this subject in the Register for 1862:

Balloon Framing for Large Barns.

In reply to Mr. Lacey's questions relating to the erection of a large barn with a balloon frame, I would state that I know of no better manner than that of constructing it over a gallows frame. In all barns requiring a thrashing floor, and for the storage of hay above, the gallows frame, with its wide openings and movable floors, fulfils a more useful purpose than any other contrivance I can at this moment suggest. The necessity for ventilation, and the room needed for moving and pitching hay, makes permanent floors and close partitions undesirable. Thus it appears that a gallows frame has an important duty to perform aside from the strength and permanence it gives to the outer structure.

Balloon framing depends in a great measure for its strength on its being thoroughly tied, that is, every piece should have other pieces meeting it at each end, and except in very small 1½ story buildings the thrust of the roof should not come upon unsupported studding.



Manner of Framing Large Barns.

No one hesitates to put a great weight upon a properly laid floor. Now suppose we turn that floor on end, so that it stands perpendicularly in the direction of the floor joists, thus making it the side of the building instead of the floor, then let it be tied at the bottom by other floor joists meeting and lapping, and at the top by the rafters coming down from the gallows frame. We thus have a side of a building that will sustain an immense thrust; but such strength is not necessary; the thrust of hay, if any, is small compared with its weight. We have lately visited a large barn near Madison, N. J., some 60 or 70 feet square, of which two sides were the gravel or concrete walls, and to all appearance there was not the slightest failure in any part of it.

The sizes of studding used in the construction of the balloon frame of large barns would vary according to the distance between the sill and plate, in the same manner that floor joists are selected for a greater or less span. We think 2 by 6 should be the least, and 3 by 8 the heaviest that is needed, and that 2 feet between centres would be just right. We should put one row of bridging through the centre of the studding in about the same manner as is usually put between floor joists.

The sills of such a barn as Mr. Lacey proposes to erect had better be of the old fashioned size, as the gallows frame is morticed and braced into it, but they may be as small as 3 by 8; the rafters and floor joist are in all cases of the same size in the balloon frame as in the mortice and tenon frame. It is not necessary to use studding full length; it can always be spliced by butting the ends together and nailing an inch strip each side, taking care to break joints in putting up the studding.

There are railroad depots at the west 45 by 150 feet, built with balloon frames without a gallows frame, but the 2d floor is at the top of the studding, and the girder in the centre is supported by posts.

I refer your readers to the ANNUAL REGISTER OF RURAL AFFAIRS for 1862 for a thoroughly detailed manner of constructing balloon frames for buildings of every class, as this is the only illustrated and complete essay on this subject ever published. The manner of erecting large barns as there described, is the best safe plan we know of.

GEO. E. WOODWARD,
Architect and Landscape Engineer, 37 Park Row, New-Yrok.

[For the Country Gentleman and Cultivator.]

Topping Corn or Cutting it by the Ground.

CORN STALKS AS FODDER.

By topping corn before it is ripe you prevent the corn from receiving that portion of the elaborated nutritive sap which it would have received from the stalks and leaves cut off, had they not been separated from the corn. On the other hand, by cutting corn by the ground before the leaves and stalks become dry, and the corn fully ripe, and setting it in shocks as soon as cut, the circulation of the sap continues, until the stalks become dry, and the corn improves in the shock. The same thing is observed in wheat, by cutting it before the kernel is hard, and placing it in shocks before it wilts, the wheat improves in the shock and will make more flour and of a better quality than if it was allowed to stand until the kernel was hard.

We have two objects in view when we cut corn by the ground. Namely, the preservation of the corn and stalks from frost, which frequently occurs before the corn is ripe, and spoils corn and stalks. Whereas, if corn is cut by the ground before the frost strikes it, both may be saved and be of a good quality.

The corn grown in this section of country is not so large in stalk or ear as that grown further south; the stalks being smaller, make better fodder, and are excellent for milch cows, producing an increase of milk of the richest quality for butter-making, and the corn weighs more by the bushel than the southern corn.

I have no doubt but that corn cut by the ground before it is fully ripe, may not be quite as heavy, but if it is well cured in the shock it will be equal in quality, and the small loss sustained in the weight will be trifling when compared with the loss of the corn, and the stalks for fodder when the frost strikes it before it is ripe. Surely if there should be no frost until the corn was fully ripe, the corn would be good, but the stalks would be dry and of little value. Finally, to sum up the whole matter, there is a certain state or condition at which corn may be cut by the ground, and the diminution in the weight of the corn will bear no comparison to the loss of the fodder, if the corn was struck with frost or allowed to stand until it was fully ripe, and the stalks, if well saved, will amply pay all the cost of cultivation.

I once planted two acres of corn, a part of it on the 8th, and part on the 10th of June. It being so late in planting, I expected it would be destroyed by frost. About the middle of September there was a slight frost, but not so severe as to materially damage the corn, and fearing there would be a more severe frost I immediately cut the corn by the ground and shocked it. The corn at this time was what we term glazed, and it ripened well in the shock, produced forty bushels of shelled corn to the acre, and the stalks proved to be excellent fodder, and the corn was of so good a quality that I had no difficulty in selecting the best of seed from it. At another time I had corn struck with frost before it was cut, that was equally as good before the frost came, and both corn and stalks were spoiled.

The subject of the value of cornstalks for fodder has been extensively discussed in the columns of the COUNTRY GENTLEMAN, some advocating the cutting of them for fodder, others the feeding without cutting, and some have considered them of little value in any form. Stalks cut and well saved at a proper time, are excellent for feeding cattle, and those cut after they become dry and hard, or frost bitten and badly saved, are of little value, the best way you can fix them. I do not think it will pay the cost of cutting them for feeding. MATTHEW M. HOWARD.

LYN, C. W.

[For the Country Gentleman and Cultivator.]

Experiments in Strawberry Culture.

Observing the article of S. L. FREY in the COUNTRY GENTLEMAN, page 30, on the unproductiveness of Wilson's Albany, reminds me of similar failures of high cultivation that have come under my observation, and goes to confirm the opinion that the same variety of strawberry in different climates, soils and locations, requires different treatment. And every successful cultivator, after examining the experience of others,—no where to be found more fully recorded than in the COUNTRY GENTLEMAN,—must by careful experiment, ascertain what varieties and kinds of treatment are best adapted to his situation.

In the fall of 1860, the writer of this took a trip among the large strawberry plantations in Maryland—many of them from 80 to 100 acres in extent, and from which the great bulk of early strawberries are gathered for Philadelphia,—one farmer having received for his crop $10,000, being an average of $100 per acre. And I am informed the same person has the present season sent 125,000 quarts at an average of six cents per quart, amounting to $7,500, giving employment to one hundred and fifty pickers.

The three principal kinds there grown, are called Scarlet, Hart, and Stewart, and succeed better on a large scale without much care, than any of the more noted varieties, such as Hovey, Albany, and others, highly esteemed elsewhere. Wishing to try those three varieties here, a few plants of each were obtained and planted in a single row, hills about two feet apart, on rich land made deep and mellow, and manure applied plentifully without measure. During the summer of 1861 they made a vigorous growth; the runners were all cut before taking root, and during last winter all covered with manure. This summer the plants made a remarkable growth, so that a bushel measure would not cover a hill without resting on the foliage. There were an abundance of fruit-stalks and blossoms—all hermaphrodites—but an entire failure of fruit—little imperfect berries not larger than peas was the result, although a very favorable season for producing a large crop of fruit grown in beds as usual.

Other experiments have proven that with hill culture thirty inches apart, and the ground thoroughly mellowed between the hills last summer with Mape's subsoil plow, runners cut off, plenty of manure, and mulched with leaves, that some varieties, such as Triomphe de Gand and Trollop's Victoria, did remarkably fine; the Lady Finger and Diadem far surpassed anything ever obtained by cultivation in beds; the Albany, Scarlet Magnate, Peabody and Hooker, were no better than by ordinary bed culture where each plant is allowed about six inches of space, and the

Hovey was an entire failure, about two acres of which that were well tilled in hills last year and runners cut short, were plowed under this season before fruiting time as valueless, while Hovey's, grown in beds as usual in their natural way, produced a fine crop, much better than for several years past.

Such has been the result here, causing doubts as to the propriety of adopting hill culture indiscriminately with all varieties, and having set out ten acres last spring, mostly thirty inches apart, with the intention of keeping them in hills without runners, we shall, after subsoiling the ground thoroughly between them, turn two rows together, forming beds about three feet wide, with alleys between, which plan has heretofore yielded us over 200 bushels per acre, and it may be advisable to let well enough alone.

Cinnaminson, N. J. WILLIAM PARRY.

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[For the Country Gentleman and Cultivator.]

ASHES FOR SANDY SOIL.

Of all the manures within reach of the farmer, I consider ashes the cheapest and most durable for sandy soil. For clover on sandy land, it has no equal among all the manures and fertilizers of the day. The soil in this vicinity is a loose sandy soil; in fact we have, as it were, a prairie of sandy plain, such as were found in nearly every portion of our country 15 years ago. They appear never to have been charged with vegetable matter, for even when the timber was first removed, and the land cleared and put to rye or other crops, they yield liberally only for one or two years, before they required generous manuring. It is loose, porous, and without that firmness which is requisite to keep plants in their places, even if their proper food could be found. This land, a few years ago, could have been bought for one-third what it would bring at the present time. The cause of this rise in the price of the land, is a liberal supply of muck and ashes. The muck is drawn on in winter and spread over the land; the ashes are applied in the spring, at the rate of 75 bushels to the acre; after corn is planted it is put on the hill or sown broadcast. The general rule is to plant with corn and put the ashes on the hill; sow to rye in the fall as soon as the corn is removed; seed with clover the following spring. The following season, after the rye is removed, the seed is gathered from the clover, and the straw left standing on the ground. This is done with one of Disbroe's Clover Strippers, an excellent machine for the purpose. Two bushels of seed is frequently obtained from an acre; the straw thus left standing forms an excellent substance in connection with the muck, to fill the pores or open places between the particles of sand, and supply proper food when acted upon by the salts around it. I have known portions of these plains, the surface of which, to all appearance, had not been covered with vegetation within the memory of man—where the blackberry vine grew weak and feeble, and five-finger vines grew few and far between, so completely invigorated and enriched in a few years, as to produce 30 bushels of rye, or two bushels of clover seed to the acre. Those lands thus brought to a state of fertility, are as capable of yielding a crop every year, under the application of ashes, as those lands that have never been reduced. The owners of farms of heavy loam have heretofore considered these sandy plains of little value, as compared with theirs; but I would sooner cultivate a corn crop on them than on the heavier loam land. I can work two acres of the sand as cheap as one of the heavier lands, because the plowing and hoeing can be done with less team and help, and in much less time. Ashes here can be bought for 12½ cents per bushel, and I think are worth 25 cents to be applied on sandy soil in connection with muck. This mode of operation for the treatment of sandy soil, so as to bring it on an equal footing in point of productiveness, requires no uncommon skill, but commends itself to the practice of all—for any common manager of a farm may accomplish it without the aid of any adjuncts of chemistry, or what are called specific manures, but by using merely those great gifts of nature. S. P. Keator. *Ulster Co., N. Y.*

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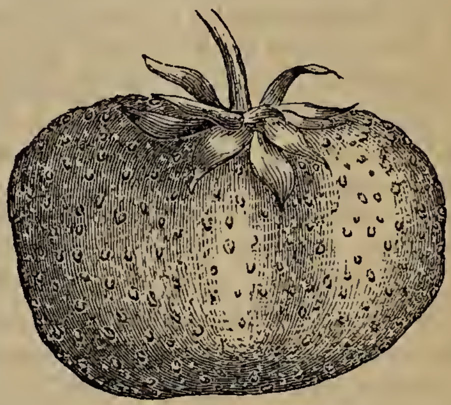
[For the Country Gentleman and Cultivator.]

The Triomphe de Gand Strawberry.

Eds. Co. Gent.—I have been requested to state publicly, as one of the results of several years successful and profitable experience in the cultivation of some of the more popular varieties of the strawberry, which particular kind I would consider best for cultivation.

The manner in which this request was preferred, would seem to indicate a covert suspicion that the decided "pronunciamento" of our "strawberry king," Mr. Knox, in favor of the Triomphe de Gand, savored somewhat of self-interest. So far as that is concerned, I imagine it would make but little difference with him, which one of all the known varieties should suddenly assume a value; for his immense plantation would supply any or all to an indefinite extent at a moment's notice; and besides this, the simple fact of his plowing under many acres of other varieties, in full bearing, during the present season, to replace them with this, would rather convey an impression that he spoke as he thought. My experience and observation would most unhesitatingly and decidedly sustain Mr. Knox in his decision. The Triomphe de Gand certainly combines in itself all the excellencies of all the best varieties. Among the good qualities which recommend it, are its immense size, superior flavor, prolificacy, equalling, if not surpassing, Willson's Albany in this respect, the solidity of its fruit, its color and fine appearance, the length of its fruiting season, and its non-liability to injure from rain and wet weather, in all of which it eminently excels. My advice would be alike to the market gardener and the amateur—plant first, second and last the Triomphe de Gand. I am pleased with the Fillmore, and believe it will become a favorite, but as yet are unable to speak of it from experience. Jno. S. Gould. *Duquesne, Pa.*



TRIOMPHE DE GAND.

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Pounds of Milk for a Pound of Cheese.

"O. B. P." of Potsdam, N. Y., gives the American Agriculturist the following account of his experience to determine this question, beginning May 15th and ending October 20th, 1861. All cheese made prior to September 20th, was shipped November 12th, the remainder November 26th. The night's milk was set three to five inches deep in tubs and pans. In the morning it was skimmed, the cream being made into butter, (7 lbs. to 100 lbs. of cheese) and the morning's milk added. Cheeses made in May required 11 pounds of milk for one pound cured cheese; those made in October 9¼ pounds, the average of the season being 10 pounds. Cheeses made in May required 9 pounds of milk to 1 pound of green cheese; those made in October 8½ pounds, the average of the season being 9 pounds. September 30th he made cheese in the proportion of 8¾ pounds of milk to 1 pound of cheese when 60 days old, and he estimates the shrinkage on 100 pounds of green cheese made in May, at 17 pounds, and and that made in October at 7½ pounds to the 100 pounds, the average shrinkage being 11 pounds in the 100.

Notes on a Couple of New-Hampshire Farms.

Messrs. Editors—A few days since I took an excursion of a few miles among the farmers of this section of our State. Two of the farms I visited presented some features I thought worthy of notice. They are not large farms, but are cultivated in a most creditable manner by the owners thereof, who, by the way, are not, strictly speaking, farmers by profession. Yet they both possess an innate love for agriculture and its improvements, and enter into its prosecution with a spirit and energy worthy of commendation, as their examples will stimulate others to follow in making similar improvements upon their heretofore too much neglected farms.

The Farm of Col. Tappan.

The first farm I shall notice, is that of Col. M. W. Tappan, who resides in the pleasant and thriving village of Bradford. Col. T. is now some over 40 years of age; is a lawyer by profession and holds a prominent standing in our courts. He has been much in office, having several times represented his native town in our State Legislature, and for six years preceding the 4th of March, 1861, was member of Congress from this district. In the call by the President in April 1861, for 75,000 "three months troops," he was commissioned as Colonel in the 1st N. H. Regiment, and was with Gen. Paterson's Division in Virginia. In all of the above named positions he has most faithfully and honorably discharged the several trusts confided to him. As a farmer he takes rank among our best ones—as a man of taste and judgment in the establishment of his grounds and farmstead, he is without a rival in our county.

The home farm contains about 75 acres, and has been in his possession seven years, previously to which, it had not been well cultivated. During the time it has been under his management, the hay and other crops have been quadrupled. The soil is mostly of a deep, loamy nature, easily worked, and when well manured and cultivated, very productive, as the splendid grass, grain and hoed crops at the present time most fully prove. A considerable portion of the farm is alluvial or intervale land, and not liable to be overflown in freshets. The Warner river (so called,) passes through the farm. He has recently built a very neat, tasteful and substantial bridge across the stream, adding very much to the looks and value of the farm, as a large portion of the cultivated grounds are on the south or opposite side of the river from the farm buildings.

There is a pasture of some few acres near his house, and at the distance of three-fourths of a mile, is his cattle pasture of about 40 acres, being one of the best grazing lots I have anywhere seen this year. There are eleven cattle, (cows and oxen) kept in it this season. Twice the number could be well kept there the present season, the feed being, in consequence of the abundant rains we have had since the 1st of June, super extra. He has also a sheep pasture and some acres of natural meadow, which yield large crops of second quality of hay. The stock kept upon the farm at the present time consists of 3 horses, 1 yoke of large oxen, 4 cows, some young cattle, and 40 sheep. He does not intend to increase the number of cattle on the place, but will increase his flock of sheep sufficiently large with his other stock, to consume the hay and other winter forage produced on his farm.

When he commenced the improvement of his farm, he had not the means of making much manure, and could not purchase it, but commenced purchasing ashes, paying 17 cents per bushel for unleached, and half that price for leached ashes. Upon his farm they have operated as a manurial application admirably. The ashes have been applied to the hoed crops, and as a top-dressing to the grain and grass crops, in most instances making their mark as distinctly as would have been the case in an application of farm-yard manure, guano or superphosphate. In the spring of 1860, he sowed two acres of ground with spring wheat, on one acre of which he applied 60 bushels of unleached ashes and harrowed them in with the wheat, otherwise the treatment of the two was alike; the wheat on the ashed part proved very much better than on the other portion of the field—so with the grass last year, which was mostly clover. This year, there is a most striking difference in the two portions of the field. The ashed portion has upon it a splendid crop of timothy or herds-grass, well intermixed with clover and honey-suckle. The portion of the field not ashed, is mostly clover and sorrel. The division line is as distinct as black and white: very probably, had the past and present seasons been as dry as we sometimes have, the result would have been different; but the abundant and timely rains of the present and past seasons have drawn forth the fertilizing qualities of the ashes and thus they have exhibited such marked effects.

Near the farm buildings, on some hillocks, ridges, and sloping grounds, in the whole amounting to many acres, was a growth of trees of various kinds, from 50 to 60 years growth from the seed. These acres of woodland have been judiciously thinned, and all the shrubbery and undergrowth grubbed up and removed. Carriage drives have been graded, and narrower paths, straight and curved, have been cut in various directions; seats, arbors and cheap and tasteful summer houses have been distributed at many points, rendering the whole park and grounds most delightful in the warm days of summer. To have got up such a park by planting trees, would have required the expenditure of hundreds if not thousands of dollars, and half a century's time. There are thousands of farms in New England, that might be beautified in a similar manner without any great expenditure of money, and we fondly hope the praiseworthy example of Col. T. may not be lost among our farmers.

The fruits, flowers, shrubbery, &c., immediately about his house and office, correspond with the other fixtures of this lovely homestead.

There is a long and narrow strip of low ground running westerly between higher lands; it was formerly wet and filled with bushes and aquatic plants. These have been eradicated, an open ditch cut through the middle, and the ground so drained as to produce a heavy growth of English grass. The ditch carries off the cold water oozing from springs at the base of the higher grounds. Towards the lower end of the ditch, he has had circular excavations 4 feet in depth, and 15 or 20 feet in diameter, walled up. In these small ponds he rears great numbers of trout. They are fed with regularity, and are as tame as barnyard fowls. I saw them fed, with crumbs of bread; the instant the bread struck the water, several of the large trout (probably weighing a pound or more,) would leap above the surface of the water, affording exquisite pleasure to "lookers on." Feeding poultry is not a circumstance to that of feeding trout. In the autumn they are occasionally fed till the deep snows come. Last year, after the pond had frozen over, he sent a boy with some chopped meat to feed to the fish. After having cut away the ice in a circle of a few inches, and dropping in the meat he lay down upon the ice, with his face immediately over the hole for the purpose of seeing them eat their rations. A large trout seeing the boy's nose near the surface of the water, and probably thinking it *bait*, quick as thought, rose to the surface and grabbed the chap by the nose. This unexpected bite caused him to give a very sudden and violent jerk of his head, and thus threw the fish upon the ice; the trout weighed about three-fourths of a pound. The poor boy carried the marks of the trout's teeth upon his nose for nearly three weeks. Some, perhaps, may think the above "a fish story." Nevertheless, it is as true as any other part of this letter.

Thousands of our farmers with a little pains-taking and labor in excavating for small ponds, where the water from brooks or springs could be made to flow into them, could cheaply provide themselves with "delicious brook trout." Trout can be reared with less expense than poultry.

Col. T.'s farm is handsomely fenced with stone wall and board fence; most of this fence is made of narrow boards and whitewashed. Substantial gates, with tall side posts and arched tops, either painted or whitewashed, add much to the appearance and value of the farm. The opening and shutting of a gate for the passage of a team is a very trifling affair, compared with that of taking down and putting up a "pair of bars" of five rails. In this matter of farm gates, the farmers in the Col.'s vicinity are following his example, as they are in many other of his improvements.

Much attention is paid on this farm to the preparation and composting of manure, and keeping all the hoed crops free from weeds. He is fully aware, "that one year's seeding makes seven years' weeding," which accounts for the almost entire absence of weeds of every description among his hoed crops.

His grounds are well stocked with various kinds of fruits. He has a large variety of plum trees, most of which are "over-loaded" at the present time, as is the case with most of the plum trees I have seen elsewhere. We can account for the abundance of plums and cherries among us this year, only upon the supposition that the heretofore troublesome curculio has *seceded.*

The other farm I visited, is owned by **Moses Gould**, Esq., the efficient and gentlemanly conductor on the Concord and Claremont railroad, (from Concord to Bradford, 28 miles.) This road was opened in September, 1849. Mr. G. was then appointed conductor, which office he has filled without *break* to the present time. For nearly thirteen years he has passed over the road twice each week day, averaging at least 300 times each year. For several years past, in company with another person, he has been somewhat largely engaged in supplying the road with wood. In this business he has been quite successful.

Some three years ago, near the village of Bradford, he purchased a farm of about 70 acres. The farm, when purchased, was "badly run down," though naturally a good soil. During the time he has owned the place he has greatly improved its appearance, and doubled the hay and other crops, having exchanged at the hotels considerable quantities of hay for manure, besides making use of large quantities of ashes obtained at Concord, at the machine shops, &c., connected with the railroads at that place. He does not pay a large price for the ashes. They exhibit a most beneficial action upon the crops on his soil. The hay crop on the portions of the fields that have been manured and top-dressed with ashes are this year really splendid; many acres will yield from two to three tons of cured hay per acre. His grain and hoed crops are also very good. A field of spring wheat just in blossom shows the largest heads I have ever seen. If the wheat escapes injury from midge, louse and rust, he will harvest an extra heavy yield.

The cars leave Bradford between 8 and 9 o'clock, A. M., and return to B. at half-past 4, P. M From that time till "dewy eve," Mr. G. labors upon his farm with a zeal and interest that "never tires." Thus far in the management of this farm, he has expended his money and labor for the useful rather than the ornamental. The balance sheet of out-goes and income exhibits a very gratifying result.

Many persons have thought that Messrs. S. and G. were foolishly expending their money in the purchase of such large quantities of ashes for manurial purposes; but "science and practice" both concur in affixing to them a high value as a manure for farm crops, more especially upon fields that have been long in grass, whether grazed by cattle or mown for hay. But few farmers are aware of the great amount and kinds of mineral matter that a crop of two or more tons of hay abstracts from an acre of land, and these mineral matters are identical in kind and quality —though not in relative proportion—with those contained in good wood ashes. Why does the growing and annual removing of our crops ultimately impoverish the soil? Why, it is mostly occasioned by the abstraction of the available mineral ingredients of the soil by the growing crops, which are harvested and carried from the land.

Professor **Anderson** of Glasgow, basing his calculations on the best analyses, and on extensive agricultural statistics gathered in late years by the Highland Ag. Society of Scotland, makes the following estimate of the mineral ingredients removed from an acre in a crop of 2½ tons of hay, viz., 129 lbs. potash, 5 lbs. soda, 35½ lbs. lime; magnesia, chlorine, and sulphuric acid, 66 lbs.; phosphoric acid, 22 lbs.; silica, (sand,) 134 lbs.—making in the whole, 391½ lbs. of mineral matter removed from an acre of land in two and a half tons of hay. (I have in the above figures, omitted the fractions, but the sum total is right.)

From the great quantity of potash (over 129 lbs.) taken up in the hay crop, it will readily be seen that unleached ashes are much more valuable for the hay crop than leached ashes; 2½ tons of hay take from the soil more than four times as much potash as a crop of 28 bushels of wheat and straw included does. From which it is very natural to infer that a dressing of ashes on grass land would prove more beneficial than on wheat.

From Mr. **Lawes'** experiments in top-dressing grass-lands with various kinds of mineral manures, each kind separate and in combination, the fact is clearly established that the increased crop of grass was mostly due to the potash and phosphoric acid in the mineral manures used. He says:

"The results in the table (of analyses) show that it was chiefly for its supply of *potash*, and next for that of *phosphoric acid*, that the mixed mineral manure was so efficacious in increasing the growth of grasses, when there was a sufficiency of available *nitrogen* within the soil." Again he says: "To turn to the figures in the table, the most striking point of contrast afforded by the view of the results of the five analyses given side by side, is the very great increase in the percentage of *potash*, wherever the mineral manure containing it was employed."

We suppose there is a *law* governing the nutrition of plants, and where they are grown in a soil containing in an available form all the necessary mineral constituents required in the growth of plants, they will take up just those relative proportions of mineral matters necessary for the most perfect development of the plants, and such always possess the highest feeding qualities, and are therefore more healthy, nutritious, and valuable as food for animals. But the *law* above alluded to, admits of much variation. Grasses will grow where there is a deficiency of potash in the soil; they will also grow where there is a deficiency of phosphoric acid and lime—a relative, not an entire or absolute deficiency of these in the soil, for on such no valuable plant can be grown. But yet grass can be, and is grown largely in some districts where the deficiency of phosphates is so great that cows and young cattle subsisting on it, or hay made from it, are afflicted with the bone disease. They have an insatiable hankering for bones, which, if they can obtain, they will chaw for the half-hour together.

To show the difference in the amount of potash (on the same kind of soil,) in the grasses differently manured as reported by Mr. Lawes, I give the following. He says:

"Whilst the unmanured produce contained only 32⅛ bbs., and that by ammoniacal salts alone only 38¼ lbs. of *potash*, that grown by the mineral manure alone (supplying potash) contained 72¼ lbs.; that by the mineral manure and smaller amount of ammoniacal salts, nearly 122 lbs.; and that by the mineral manure and the larger amount of ammoniacal salts, nearly 133 lbs. of potash per acre annually. The *phosphoric acid* was increased from about 7¾ lbs. per acre per annum without manure to scarcely 10½ lbs. with ammoniacal salts alone, to 16¼ with mineral manure alone, to about 27½ lbs. by the mineral manure and ammoniacal salts together."

The deductions to be drawn from the above statement, are, 1st, that the application of mineral manures containing potash (good unleached ashes contain all the mineral ingredients found in our cultivated crops)—greatly increased the crop and the quantity of potash in it. That a mixture of mineral and nitrogenous manures will still further increase the crop of grass and the potash and phosphates in it, thus rendering it every way more valuable for feeding purposes, over that not manured, or manured singly, with either mineral or nitrogenous manures. Hence, it will be more economical to apply both kinds at the same time. To apply ashes and stable manure together, in their raw state, might result in much loss of ammonia. Doubtless the better way would be to compost ashes, manure, and a sufficiency of muck to absorb and retain the gases, while the heap was composting—3 to 6 months time might be required for this operation—but it would pay, no doubt of that.

But if any object to the labor of composting, then use the ashes alone, if you can obtain them at a reasonable price. In the Co. Gent., May 1st, I gave the result of experiments in top-dressing grass lands with several kinds of manures, including ashes, as reported by R. S. Rogers of South Danvers, Mass., and H. J. Hodges of the same State. They both reported most favorably of the value of ashes for top-dressing grass lands. But ashes, like all other special manures, will sometimes fail to exhibit favorable results. The reason why it is so, in all cases, is not well understood. Similar facts in regard to the use of superphosphate, and gypsum on corn, have occurred within my knowledge in this place the present year. In some instances superphosphate and gypsum have exhibited a most favorable result—in other instances, as I was told by a farmer a day or two since—it has failed. He said he used a bag of superphosphate, and says, "I defy any man to tell where the phosphate was used and where it was not." Alternate rows were experimented with, but no difference in them. Levi Bartlett.

Warner, N. H., July 22, 1862.

[For the Country Gentleman and Cultivator.]

The Potato Rot and its Prevention.

I take the liberty of making a few remarks on the potato disease and my method of saving potatoes when the rot has made its appearance. Divers opinions have been advanced relative to the cause of the potato rot, but I have heard no reason assigned that was satisfactory to me, except that of atmospheric influence, which we have no remedy to counteract.

Truly an excess of moisture (when the disease is present,) will cause a decomposition of the potato, but this is not the cause of what we term the potato disease. As soon as we discover the leaves and stalks of potatoes become suddenly wilted and black, when there has been no frost to cause it, we may rest assured the disease is present, and I believe the sooner the potatoes are dug after this appearance the more sound ones you will have, and the more that are partially affected may be saved for feeding purposes.

It is the deleterious sap of the diseased leaves and stalk circulating to the potato that causes it to rot; cut off the communication and you arrest its progress. If partially affected potatoes are separated from the sound ones and spread thin upon the floor of some out-building, they will become dry and keep well for some time, and may be fed to good advantage in fattening cattle. I had over 200 bushels of this description one season, which I fed out for the above mentioned purpose, and saved what otherwise would have been a total loss. The better way is to commence feeding the unsound potatoes as soon as you begin to dig.

I have noticed that some potatoes appear sound except a number of white specks on the surface, and on cutting them I found dark colored streaks extending through the potato, showing decidedly that the potato was diseased; such potatoes if deposited in a heap would shortly ferment and rot. The reason why so many potatoes rot in the cellar is because so little care is taken in selecting all that are unsound. Again, I have observed that when the leaves and stalks of potatoes were *suddenly* and *totally* killed by disease, that very few potatoes became rotten, the circulation of the deleterious sap being entirely arrested. The method I pursue when I find my potatoes diseased is to dig them as soon as possible (in fair weather if practicable,) and sort out all the unsound ones I can discover while picking them up; and deposit the sound ones on the ground in a long narrow heap in the form of a roof and then cover them with straw laid on lengthwise from the ground to the top of the heap, for the purpose of protecting them from wet in case of rain, and then put on sufficient earth to prevent them from freezing. If there should be severe frost, let them lie a few days, and then uncover and carefully sort and put into the cellar, and keep your cellar cool until the frost becomes so severe that there may be danger of freezing in the cellar, then close up for winter. I have never suffered any loss from potatoes rotting in the cellar since I have used the above mentioned means to prevent it. M. M. Howard.

Lyn, C. W.. July 29.

[For the Country Gentleman and Cultivator.]

REMEDY FOR FOOT AIL.

Messrs. Editors—In the last number of The Cultivator, I notice an inquiry for the cure of foot ail in cattle, over the letters S. L. F., Palatine Bridge, N. Y.

I have in the last twenty-three years, had many cases and tried several remedies. The following is a very simple, and I have found it a safe and effectual remedy, in every case that I have had occasion to use it, for the last seven years. I think I can safely say that I have been successful in at least thirty cases, for myself and neighbors in that time, and never failed of a speedy cure in from three to five days.

Tie the animal to a post in some suitable place, or in a roomy stable, and wash the foot well with strong soap suds. If it proves to be a severe case, then put about a table spoonful of fine salt in the claw or part affected, and pour about half the quantity of spirits turpentine over it. I have found it much better than the old fashioned and cruel torture of drawing a tarred rope through the claw every morning.

I would say, if the animal is not relieved in two days, repeat the application. I have seldom had occasion to repeat it, although about two years ago one of my neighbors called on me to see a lame cow, one that he was fatting, and that had all at once become so lame that she could with difficulty walk. It was so bad a case that one could smell the disease as she hobbled along. After washing and applying the above every other day for a week, she got well over it in a short time, and made as nice a beef as any one could wish.

The writer mentions that there are two kinds—the worst is that which breaks out above the hoof. I would say that I have never seen any except such as become diseased in the claw, and in some severe cases they break out on the upper part. W. G. W.

Salem Co., N. J.

Soldering Irons and How to Use Them.

When we consider that accidents will occasionally happen in the best regulated families, and that tin ware is so easily injured, we are surprised that every house-keeper and especially every dairyman does not own one of these useful tools. In most families its trifling cost would be saved in a single year.

The utensils to be soldered should be dry and clean, as it is useless trying to solder dirty tinware.

The best proportion of lead and tin for solder is one part lead to two of tin.

The soldering iron should not be heated sufficiently to change the color of the copper, as it hurts the metal.

The best preparation for brass, copper, zinc, lead and iron, is *sal ammoniac*. Dissolve a small piece in cold water, and apply with a swab or brush. These metals should be filed or scraped bright before the sal ammoniac is applied. Bright tin requires nothing but powdered rosin. St. Lawrence.

Introducing Italian Queens---A New Method.

Editors Co. Gent.—Last season I first attempted to introduce the Italian variety of bees in my apiary, but the method of doing it was new to me, and like some others, failed in the attempt. This season I tried it again and succeeded after the experience of last year. I obtained my queen from Mr. Quinby. She was of a beautiful color. I have raised a few queens from her which I introduced without a cage—a new method to me, and comparatively easy. The method is as follows: After the swarm has been deprived of the native queen and cells four or five days, take a cup containing a small amount of honey, and put the queen in, being sure you get her completely covered with honey as quick as possible, without injuring her; then with a small spoon carefully put her in the top hole of the hive; and by the time she is licked off she is all right. The few trials I have given this method have not failed in a single instance, but as I have not thoroughly tested it, I would advise none but our large Italian bee raisers to try it, and then communicate through the columns of the Country Gentleman. During this month there will be more queens introduced than in any of the past ones; hence it will be necessary for our bee-keepers to communicate as quick as possible, so as to give amateurs a chance. L. A. Aspinwall.

Ireland's Corners, Aug. 6, 1862.

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A PROFITABLE HENNERY.

The other day we went up to take a look at the garden of our venerable friend, F. Wingate, Esq., widely known as the manufacturer of the old fashioned *corner clocks*, who, having retired from business, now resides on Green-street, opposite the Methodist church—but before entering the garden we stopped to take a look at the poultry yard, and while there obtained from him some interesting items of his experiences in *henology*, which may prove valuable to our readers.

Mr. Wingate's poultry house and yard are both well planned—in winter the hens have a warm and commodious apartment, and in summer they are given free use of the yard, but never allowed out of it. Fresh water is kept by them all the time. The apartment in which the hens roost is about ten feet square, and it is also provided with several box nests. There are two perches for the hens to roots upon, about eighteen inches apart, and under them is a broad shelf for the purpose of catching the droppings. This is supplied daily with loam, ashes, stable dressing, &c., and is scraped off each morning. Mr. Wingate finds this a most efficient fertilizer, applying it to his grapevines and also to other garden crops, with the best results. Adjoining this room is a larger one, which is used for the winter quarters of the poultry, connected with the other by a sliding door for the use of the poultry. Each fall Mr. W. collects from the streets about two cart loads of fallen leaves, and places them upon the floor of this room; consequently the hens have a warm, dry, and comfortable chance all winter. But this is not all; the leaves thus used become partially rotted, and with the droppings of the poultry, make a considerable pile of excellent dressing. Farmers and others who keep hens, and allow them to freeze to death upon the cold, damp manure heap of the shed, should make a note of this.

In feeding his hens, Mr. W. makes use of the waste from the kitchen, as he keeps no pig. The potatoes, &c., are mashed up and mixed with oat meal; and besides this, corn is given them in sufficient amount to keep them in good condition. He also uses what bones accumulate from the meat used in the family. For the purpose of crushing these up fine, he has a substantial block with the top dug out in the form of a bowl, into which the bones are placed, and with an axe reduced to a form readily eaten by the hens. At present Mr. W. has twenty-four hens and a crower. He keeps the hens until they are three years old, and then sells them in the fall, after the best season of laying is over. To replenish his number, he buys pullets of some good laying breed.

Mr. W. keeps a correct account of the number of eggs laid by his hens. The number of eggs laid each day are set down, and each month added up. The account of eggs laid last year, (1861) by 23 hens, as follows:

January	48	Eggs.	July	345	Eggs.
February	169	"	August	309	"
March,	357	"	September,	241	"
April,	393	"	October	95	"
May,	473	"	November,	18	"
June,	403	"	December,	18	"

In other words, 239 dozens of eggs, which at 15 cents per dozen—the average price during the year—would amount to $35.85. The cost of keeping the hens for a year, Mr. W. considers to be $8, as the waste from the house he does not reckon at full value. This is a profitable henery, and is a good paying branch of Mr. Wingate's establishment.—*Maine Farmer.*

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[For the Country Gentleman and Cultivator.

A BAD WEED---SORREL.

Messrs. L. Tucker & Son—Enclosed I send you a stem of something, but what I cannot tell; I want you to tell me, if possibly you can. It grows in a swamp, and in the black land where I have my root crops, and this is the first year I have had it. It is in large stools like Cock's-foot grass.

Would you be so kind as to state in The Cultivator, the best way to get rid of sorrel, as I am very much troubled with it. I have had five acres in clover, thinking I could smother it out, but it has let me have very little clover. I intend plowing the second crop of clover in, but I am afraid I shall fill the land with the seed of sorrel. William Maud. *Milwaukee Co., Wis.*

The plant sent by our correspondent is the *Bromus secalinus*, a celebrated weed, which has caused a great deal of controversy, and is known in the north as *chess* and further south as *cheat*. The latter name is quite appropriate, because by adopting the opinion that it is degenerated wheat, some farmers have been cheated out of good crops, and also been cheated into cultivating a weed. The fallacy of the opinion is proved by the fact that some skillful farmers have entirely eradicated it from their lands, where it has not again appeared.

Sorrel should be treated as any other weed—that is, worked out by cultivation. Hoed crops, as corn, beans, potatoes, &c., well cultivated, with a free use of manure, will make the land clean in time. It is not usually troublesome in rich soil, and in some localities, the use of lime and ashes has proved beneficial.

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[For the Country Gentleman and Cultivator.]

Vermin in Poultry.

Last winter, after buying a lot of live turkeys, and turning them loose, I noticed a few of them appeared stupid, and on examination found them, as the saying is, "as lousy as witches." I made an application of a little kerosene oil, and from their improved appearance in a few days, am satisfied that the varmints left on the double quick. A. Moss.

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Late and Early Wheat Sowing.—Speaking of the *wheat worm* and the propriety of sowing late—in The Cultivator for 1839, vol. 6, page 26, is the report of a committee, (J. Buel, chairman,) designated at the State Agricultural Convention, for the investigation in regard to the grain worm—"that all wheat sown before the 10th of May was more or less injured; all that was sown after the 20th of May escaped its ravages; of that which was sown between the 10th and 20th, some escaped injury, and some was considerably injured." In addition to their own observations, they state—"that an observing farmer in *Wallingford, Vt.*, nearly 100 miles north of Albany, sowed parcels severally on the 25th of April, on the 19th and 25th of May. The first sown was virtually destroyed by the worm; the second partially so; while that sown on the 25th of May entirely escaped, and was a full crop." The committee also quote from a letter to one of them, from Mr. R. Forsyth, residing at Champlain, the northern town in our State, which gives his observations for a series of years, from 1833 to 1838. J. R. Prince. *Erie Co*

[For the Country Gentleman and Cultivator.]

CHAPTER ON WINE-MAKING.

As grape culture has become an "institution" of this country, I propose to make a few remarks on domestic wine making for the benefit of your grape-growing readers.

In order to make the best wine that the kind of grape grown will admit, allow the fruit to remain on the vines till fully mature, then pick carefully, and remove from the clusters all unripe or imperfect grapes; then put your selected, best grapes into a tight cask well cleaned, in small quantities; say about a bushel at a time, which are to be mashed with a common clothes pounder, or other similar instrument, till the pulp and seeds become well separated, and the juice of the grapes thoroughly expressed.

My remarks will be confined to wine making by those who merely desire to make a barrel or less for "home consumption;" and who are not expected to be provided with the facilities that professed wine makers possess.

Having pounded the first basket of grapes, turn the contents of the cask into another vessel, and proceed as before till all your grapes are beaten or mashed, when you may proceed to express the *must* or pure juice of the grape, entirely separated from the skins, pulp and seeds of the fruit.

In the absence of a wine press, this may be done by placing the mash in a strong bag, made of strainer cloth, and then press out the *must* in any manner that may be the most feasible. For expressing a few gallons, it may be done with the mere hands, but when a barrel or more is made, some lever should be brought to bear upon the bag, in order to express the most of the *must.*

My system of applying the lever is as follows: I first set a large wash-tub against the studding of the side of my barn floor, upon which I lay a board, upon the centre of which the bag of mash is placed. I then nail a strip of plank to a stud, of the right height to receive the end of the lever, which is made of plank, and about eight inches wide where it comes in contact with the bag, and about eight feet long, being tapered off from the bag to four inches wide at the handle. The pressure exerted by such a lever, will be apt to rend the bag, unless quite strong, and but very little *must* will be lost, through the cheapness of such a temporary press.

On this plan enough grapes may be mashed, and the *must* expressed, to make a barrel of wine, in half a day, by one person.

The next question is, what is to be done with the *must*, whether it be five, ten, thirty or more gallons? Shall sugar and spirits of any kind be added to it?

It is contended by some people, that by adding anything at all to the pure juice of the grape, it destroys the value of the wine, in their estimation, and makes rather a *cordial* than wine.

Mr. Longworth, the celebrated wine-maker of Ohio, adds nothing whatever to the *must* of the Catawba grape, from which most of the Ohio domestic wines are made. He puts the *must* of a score or more of vineyards into a large cistern, then drains it off into large casks for fermentation, after which the wine is bottled, and in due time sent to market; but in no case, I believe, till it is a year old.

But Mr. Longworth's wines are not palatable to most American tastes, and are considered by many people as but a grade better than our best bottled cider, although he finds sale for large quantities at $5 to $8 per dozen bottles. Nor are the wines of other Ohio grape-growers, who adhere to the *pure juice* principle, any better.

The addition of sugar—the pure granulated, or best white coffee, should be used, if any, at the rate of two to three pounds per gallon—the latter quantity preferred in all cases, where the expense is not considered.

The next question is, shall any kind of spirits be used? Some wine makers contend that it is impossible to make a really *good* wine without adding spirits. I have my opinion on that point, which is, in a measure, that it greatly depends on the variety of grape used, whether spirit of any kind is absolutely necessary, in order to make a really good wine, as the best judges would pronounce it. There are some varieties of grape from which, in my opinion, it is impossible to make good wine without the addition of spirits, while other kinds make a saleable wine without it. If spirits be used, let it be *alcohol*, which is without flavor, or what is called "*pure spirits*," which is a much cheaper article, not half so strong, and also wholly free from any flavor aside from that of *strength*. It is not generally kept on sale at the stores, but may be obtained at any distillery where alcohol is made. Three gallons of alcohol, 95 per cent. proof, such as is usually sold by druggists, or six gallons of pure spirits, to a barrel of wine, is the *maximum* that should be used; while half that quantity will generally suffice to keep the wine from souring, when the warm weather of the following season comes on.

Both the sugar and the spirit should be mixed with the must as soon as pressed out, when the wine is made. It should then be put into a suitable cask. Wine casks, such as imported wines have been sold from, are best; but alcohol casks are very good, and will not impart the least unpleasant flavor to the wine. The casks should be well cleansed, and if at all impure, let a brimstone match be burned in the bung, made of a strip of rag, dipped in melted brimstone, lighted, dropped into the cask, and after a minute or two put in the bung to remain a few hours, when it is ready for the wine. The Ohio wine-makers burn such matches in all their casks, without regard to their condition; but I am of the opinion that such a process is not necessary, except in cases where the casks contain some manifest impurity.

The wine being placed in the cask, it should be put in a cool, airy cellar, where the thermometer stands in summer at about 60 deg. Fahrenheit. It should be so placed that the wine can be drawn off, without changing the position of the cask, the tap-hole being previously made and stopped with a plug, and about eight inches from the lower edge of the chime of the cask. If the tap-hole is lower, the sediment of the cask may not settle below it, which would render racking off the wine in a pure state impossible. If the quantity of wine be less than a barrel, a half barrel, or a cask, serve it in the same way, but always have the cask *full* when fermentation has ceased, and for this purpose a gallon or so of the wine may be kept separate in a jug or demijohn, to be used in filling up the casks.

The bung being driven in, a small gimblet hole should be made at the side of it, as a vent, into which place a spile, so loosely that the air will escape around it, or this vent may be left open for two weeks, when the spiles may be put in and removed daily, to allow the gas to escape, till it ceases to escape altogether; then start the bung, fill up the cask to the bung-hole, when close all tightly. It will be well to remove the spile a few times during the three following months, to allow the collected gas to escape, but that is not very important.

In the following April or May, according to climate, the second fermentation commences, when the wine should be drawn off into another clean, pure cask, the sediment filtered, and all put under *fining* process.

There may be four or five gallons of thick sediment, which is to be purified as follows, the process being *original* with me, and a very good one:

Take ordinary white flannel, which sew around a wooden or an iron hoop 18 to 20 inches in diameter, tapering down the bag to a point, two feet long at least. This strainer when made is funnel shaped, and to the hoop of which three strong cords are to be attached to suspend it, so that the extreme point of the cone will hang about a foot from the floor. Place a pail under it, and pour in the sediment, emptying the pail a few times, till it runs clear, when the strainer may be filled, and left to run with its contents, which will require about twenty-four hours to completely purify the sediment of a barrel of wine. The latter part of the running may be into a jug with a funnel in it, which will keep the wine, perhaps, some better than if it ran into a pail. All the sediment will be found adhering to the sides of the strainer, and what runs out will be much purer than that which is drawn from the cask before the sediment is reached.

The original cask may now be washed clean, and the wine returned into it, when it should receive the *fining* matter, and then be placed in position for racking off againg the following fall.

Take the whites of two dozen of hens' eggs and beat them, after which mix and beat them with a gallon of wine, which should be left out of the cask for the purpose. This mixture is then to be put into the cask, and the whole stirred at the bung; then fill up, bung tight, and nothing more is required till fall.

I will here observe that an excellent process for allowing the gas to escape at the first fermentation, is the use of a small glass or tin *syphon*, which is fitted into a hole in the bung of the cask, and the upper end placed in a cup or bowl of water, which allows all the gas to escape through the water, while no air can return through the same channel. The Ohio wine-growers use a syphon, but I have made very excellent wine without one, and do not consider them absolutely essential, though they are better than the spile system.

In October the wine may be racked off the last time, when if rightly made and managed, it will be very clear, and equal to the most of imported wines. That which I made from the Concord grape in 1860—two casks—on the above system, was sold to wine dealers, who pronounced it the best *native* wine that they ever tasted.

It requires skill to make a good wine; and all the minutiæ of the process must be well attended to, or there will be a failure.

A very fair wine can be made from almost any variety of grape, when not fully ripe, as is the case sometimes when early frosts occur. In such cases, if the grapes are half green, good wine can be made from them, with sugar and spirit.

Some people seem to think that the addition of *alcohol* renders the wine *impure*, when the grapes themselves contain from *ten* to *fourteen* per cent. of just such stimulating alcoholic spirit as alcohol itself, while the sugar added contains about as much more. Wine that contains not a particle of sugar or spirit added to it, is still an *intoxicating* beverage, and is not a whit more *pure* as regards *intoxicating* qualities, than that to which sugar and spirit has been added, but is only less intoxicating; still, when a *good* wine can be made without the addition of of these articles, I say let it be done. I have made wine on both systems, and shall probably continue the same practice, according to the variety of grape that I use.

I will here add that the addition of spirit to the must at the time it is expressed, will partially prevent fermentation, but it does not thereby injure the good qualities of the wine, according to my experience.

They who imagine that it requires neither sugar nor spirit to make grape wine that will stand the heat of our summer without injury, will seldom produce anything better than good refined cider. They may call it *wine*, but it can never be made to be popular and in good demand by American wine-drinkers. T. B. Miner.

Clinton, N. Y.

[For the Country Gentleman and Cultivator.]

LIMING WHEAT TO DRY IT.

Messrs. Editors—I have seen an article in the Country Gentleman, (page 91,) in regard to liming wheat to dry it, and as I have had some experience with limed wheat, I thought I would give my experience in regard to it.

My experience relates to the grinding, and as far as it goes, is not favorable to the use of lime. It makes the kernel flinty—more like small gravel stones than grain, and it takes the face off a mill stone in a short time. The flour is of an inferior quality, and the yield small. We could never give satisfaction to customers and ourselves in grinding it, and for that reason always avoided it if we could. We would advise any farmer having damp wheat, to spread it, and dry it by stiring instead of liming.

General Hospital, Annapolis, Md., Aug. 9th. P. C. Mead.

[For the Country Gentleman and Cultivator.]

STOCK-GROWING IN VERMONT.

Messrs. Editors—I have lately been looking over the reports of the Cambridge market for live stock, and from the weekly returns of the cattle, sheep and lambs, calves, and horses brought to that market, can be obtained the number sent to that place from the several New-England States, as well as from other places. The reports for 1861 include every week in the year except the first weeks of April and July, which are omitted, for what reason I do not know. From these returns we are enabled to see how those of Vermont compare with other States, and also how they compare with those of the preceding years. For 1861, Vermont sent to this market the following amount of stock:

	Cattle.	Sheep and Lambs.	Horses.
January, ...	1,020	3,950	
February, ...	748	2,768	16
March, ...	1,040	3,202	17
April, ...	294	1,803	78
May, ...	152	2,600	87
June..................	241	3,114	9
July, ...	107	2,180	110
August, ...	1,068	7,447	133
September,.........	1,520	6,140	
October, ...	1,818	5,864	33
November,.........	2,314	5,159	104
December,.........	976	2,807	

Making in the aggregate, 11,298 cattle, 47,034 sheep and lambs, and 587 horses. From the report of the market for 1860, I find that Vermont sent 16,267 cattle, 82,242 sheep and lambs, and 711 horses, showing a decrease of 4,969 cattle, 35,208 sheep and lambs, and 124 horses. The decrease in the number of horses is accounted for from the fact that a large number of horses were taken from the State for the use of the army.

The Secretary of the Vermont State Agricultural Society, in his last annual report to the Society, stated that there were 55,000 horses in the State, and that during the preceding year (1861) 10,000 horses had been furnished for the army. The falling off in the number of cattle may have been caused in part by the stringent laws passed by the State of Massachusetts, to prevent cattle from other States being brought into that State during the prevalence of the pleuro pneumonia; though I think that the large influx of western cattle into the market, during the spring and fore-part of summer, was the principal cause which kept the cattle back from that market.

There is but one reason that I can assign for the great disparity in the number of sheep and lambs between the two years, and that is, the sudden rise in the price of wool during the summer and fall of last year, caused those who had sheep to keep them instead of selling as they usually have done, and where it was practicable, to increase their flocks to their full capacity. There was a great demand during the fall, for store sheep and lambs to keep through the winter, in anticipation of high prices for wool this season, which up to the present time have been fully realized. Another cause has contributed indirectly perhaps to this result, and that is this: During the summer of 1860, a very severe drouth occurred in the western part of the State, embracing that section the most largely engaged in raising sheep, and in consequence, large numbers of them were sold and taken out of the State. Last year the crop of hay in the same section of the State was good, which made a demand for sheep to restock the farms in that vicinity, instead of there being a surplus to send off. C. T. Alvord. *Wilmington, Vt., Aug.*, 1862.

THE CULTIVATOR.

ALBANY, N. Y., SEPTEMBER, 1862.

☞ We learn that SAMUEL M. FOX, Esq., formerly of the eminent commercial firm of Bolton, Fox & Livingston, has recently purchased the estate of the late Mrs. HENRY W. LIVINGSTON in Columbia county, four miles from the city of Hudson. He intends establishing himself as a breeder of fine stock upon this extensive farm, which includes, we believe, from three to five hundred acres of land; and, with that view, has just bought out the entire *amateur* Herd of Col. LEWIS G. MORRIS.

This choice collection of Short-Horns numbers twenty-two head, and was sold to Mr. FOX by Col. MORRIS, at prices which must be considered as encouraging, in view of the present unsettled condition of affairs, and the varying ages of the anmals themselves. Six of them, for example, were bull calves, and two heifer calves, making eight head dropped since the 30th of May last, and all under eight weeks old. For the whole herd of twenty-two, the prices per head ran from $350 to $700.

Mr. FOX must be regarded as very fortunate in obtaining such a herd to start from; and, with the means and attention which he proposes to devote to the subject, he can hardly fail to rank hereafter among our most prominent owners and breeders of Short-Horns. As to Col. MORRIS, we scarcely know whether to congratulate him upon the brilliant result of this, his second "last appearance" on the Short-Horn stage, or to express the hope that the curtain may sometime rise again on the familiar pastures of Scarsdale and Fordham—disclosing yet other "select roans" in the foreground of the tableau, with the experienced manager himself smilingly caressing them, and sure of once more winning a storm of applause whenever he shall actually conclude to wean himself from his favorites, in a last "final benefit."

PLAN OF CARRIAGE HOUSE.—The plan of a carriage, house and horse barn, from a Yates county correspondent, is well designed in every respect, with the exception of a serious objection—the stables for the horses are in a basement or cellar. Owners of horses, who desire to secure them as much as possible from the diseases and other ill-effects of damp stables, have now generally discarded cellar stables. Under these circumstances it seems hardly necessary to incur the expense of engraving the plans. We may remark, however, that where there is a natural drainage effected by a deep bed or subsoil of gravel, a sufficient degree of dryness may be secured by double walls, to intercept the moisture from the earth banks. There are not many places where this essential could be secured.

The plan sent us is for a building 26 by 38 feet. It has seven stalls in the basement; a carriage house, harness room, and bins for grain next above, and a hay loft over the carriage house. It is so arranged that no dust can pass from the loft to the carriage room. A shoot extends from the hay-loft to the basement for the discharge of hay, and tubes from the granaries to the basement for feeding the animals. It will be perceived that unless the basement is set well in the ground, it will make high pitching to place hay in the loft.

AN EXPERIMENT IN HAY-MAKING.—A good deal of discussion has occurred at different times as to the cost of manufacturing hay with modern machinery. A few days since, we performed an experiment, using a mowing machine, old-fashioned revolving horse-rake, and Gladding's horse-fork. We report the trial made, because it was performed without any view whatever, to such a report, most of the hands being rather inexperienced, and without the superintendence of the proprietor. In most cases, farmers would drive work much more expeditiously, even for ordinary every-day business. Instead of unloading a ton of hay in five or ten minutes, twenty was more commonly consumed in this experiment. The hay was drawn over half a mile, which also required more time than would be necessary in other instances.

Cutting 5 acres of clover, paid 50c. per acre,	$2.50
3 men 2 hours each, raking and bunching,	0.50
3 men and 1 team, ¾ of a day, drawing,	4.00
Cost of making and drawing 8 tons,	$7.00

or 87½ cents per ton. The men were working by the month, at a little less than a dollar a day, and the team alone was estimated at over two dollars a day, which is more than farmers would usually allow. We think it would be safe to estimate the cost of manufacturing and storing hay, with all the contingencies of weather and accidents, at a dollar a ton as the highest; and in many instances, with the best management, it would cost but little over half this sum, by using mowing machines, horse-rakes and horse-forks. J.

☞ JONAS WEBB has sold out his flock of South-Downs, and WM. SANDAY imitates the example with his no less celebrated LEICESTERS. With these sheep, indeed, he has been for fourteen years past, almost beyond competition, and, at several of his more recent lettings, he has obtained larger prices than were commanded for the famously high-priced South-Downs. Out of the nine prizes at Battersea, Mr. SANDAY took seven. At thirteen shows, in thirteen successive years, he has taken no fewer than sixty-two prizes and twenty-three commendations. At his Sale, July 9th, there were 73 rams set down for sale, but one was withdrawn, being lame, and not in a fit condition to be offered. The result with the others, was as follows:

	Average.			Total.		
	£	S.	D.	£	S.	D.
30 Shearlings,	24	19	9	749	14	0
22 Two-Shears,	30	14	9	676	4	0
12 Three-Shears,	26	3	3	313	19	0
5 Four-Shears,	24	3	0	120	15	0
3 Five-Shears,	15	1	0	45	3	0
Total				£1,905	15	0
Average of 72 head,				£26	9	4½

But, aside from there having been a far smaller number sold, these prices are not up to those attained at Mr. WEBB'S Sale of last year, when 208 South-Down rams went for an average of £27 14*s.* each.

SUGGESTION TO HORTICULTURAL SOCIETIES.—In offering or awarding premiums for "floral ornaments," fine flowers and neat arrangement are not enough, unless there is fitness in the use of the material composing them. We have seen temples built of roses, and in one case a *flower-lady*, that is, a girl wholly made up of flowers, face, arms, crinoline, and all. It should be always borne in mind that flowers should be only a *decoration*, not the material for solid masses. A pillar or a basket may be twined with flowers, not made of them. To erect them into solid structures, is like building a barn out of ribbons, or the arch of a bridge of point lace.

☞ Keeping pace with the increasing population, and with the growing demand in Europe for American breadstuffs, the milling business of the United States has grown during the past ten years into immense proportions. The product of the flour and grist mills in 1850 reached a value of nearly $136,000,000, while in 1860 the returns exhibited a value of $223,144,369—an increase of 64 per cent. The largest mill is in Oswego, which in 1860 produced 300,000 barrels of flour; the next two in Richmond made 190,000 and 160,000 respectively; and the fourth, in the city of New-York, ground 146,000 barrels. Another use for grain, of not quite so gratifying a character as that of grinding it into flour or meal, shows also an astonishing advance. It appears from the last Census, that in 1860, over 88,000,000 of gallons of spirituous liquors were produced. The Western States made 45,000,000, and the Middle States 37,000,000 gallons whiskey alone. In 1850 the quantity of spirituous liquors produced was 42,133,953 gallons, so that the increased manufacture is 100 per cent. The total number of gallons of proof spirits distilled in England, Ireland and Scotland in 1854—the latest figures we have—was 26,441,537. The increase in the United States of malt liquors is larger than that in spirituous liquors. The quantity made in 1860—including 855,803 barrels of lager beer—was 3,235,545 barrels, an increase of 175 per cent. over 1850.

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☞ Mr. **Robert Smith**, a member of the Council of the Royal Agricultural Society, publishes in the Mark Lane Express, a table of the *girth* in feet and inches, of nearly all the cattle and sheep to which prizes were awarded at the late Show at Battersea Park. As matter of curiosity we give the averages, in one or two classes, of the leading breeds:—

	Average age.		Average girth.	
SHORT-HORNS—3 Aged Bulls,	3 years	9½ months.	8 feet	7 inches.
3 yearling bulls, ...	1 "	7½ "	7 "	3 "
HEREFORDS—3 Aged bulls,	4 "	10¾ "	8 "	4¾ "
3 yearling bulls, ...	1 "	11 "	7 "	1 "
DEVONS—3 Aged bulls, ...	3 "	3½ "	7 "	7 "
3 yearling bulls, ...	1 "	7 "	6 "	5⅔ "
ABERDEEN—3 Aged bulls. .	5 "	2⅔ "	7 "	10 "
3 yearling bulls, ...	1 "	3⅔ "	6 "	5 "

It seems from this that the winning bulls in the aged classes were youngest in the Devons, next youngest in Short-Horns, next in Herefords, and oldest in the Aberdeens. The girth was largest in the Short-Horns, next largest in the Herefords, next in the Aberdeens, and smallest, as would be expected, in the Devons. Of the yearling bulls, the Short-Horns also girthed the most, the Herefords, averaging 3½ months older, coming within two inches of them, and the Aberdeens in this class falling even behind the Devons.

As to the Sheep, the oldest rams taking first prizes, in the different breeds, girthed as follows:

	Age.		Girth.	
Cotswold ram...............	3 years	4¾ months.	6 feet	1½ inches.
Oxfordshire ram,............	2 "	4¾ "	5 "	9 "
Shropshire ram,............	3 "	3½ "	5 "	7 "
Lincoln ram,...............	3 "	3 "	5 "	3 "
Leicester ram, ...	2 "	4 "	4 "	11 "
Hampshire ram.	2 "	5 "	4 "	11 "
South-Down, ...	3 "	4 "	4 "	10 "
Kentish ram................	4 "	2 "	4 "	8½ "
Dorset ram,................	3 "	6 "	4 "	4 "
Cheviot, ...	2 "	2¾ "	4 "	1 "

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Devons in Allegany County.—We learn that Mr. **Wm. Simpson**, Jr., of New-Hudson, Allegany Co., N. Y., a young and enterprising farmer who has already some fine stock in horses and sheep, has lately purchased four cows, two heifers, one two-year old bull and a bull calf, from the superior Devon herd of **E. G. Faile**, Esq. of West Farms, as the foundation of a Devon herd for his own farm.

☞ A "Preliminary Report" on the United States Census of 1860 is in preparation, which, when published, will doubtless afford a wide field for thought in every department of industry, and in none more than in Agriculture. A transcript of the statistics of the agriculture of New-York has been furnished in detail for the forthcoming volume of the Transactions of the State Agricultural Society, and we have long been intending to call attention to some of its results as regards the Farming of our State. Meantime the New-York Tribune has received an advance copy of the "preliminary report" referred to, and we obtain from it the following table, showing the Agricultural Production of the whole Country, according to this and the last national census—having reference respectively to the crops of 1859 and 1849—together with the increase which the last ten years display in the aggregates quoted. While our population during that time has advanced about 35½ per cent., our production of wheat "has increased 70 per cent. ; of corn, more than 40; cotton, 110; dairy products, 46; value of slaughtered animals, over 90; sheep and wool, over 10; sugar from cane, nearly 30; molasses about the same; maple sugar, 14; tobacco, considerably over 100; wine, more than 700; hay, nearly 40; orchard products, over 150 per cent." The table is as follows:—

Articles.	1849.	1859.	Increase.
Wheat, bushels, ...	100,485,944	171,183,381	70,697,435
Indian Corn, bushels,.....	592,071,104	830,451,707	238.380,603
Cotton, bales,..............	2,445,793	5,196,944	2,751,151
Butter, lbs.,...............	248,675,322	460.509,854	211.834,532
Cheese, lbs., ...	105.535,893	105,875,135	339,242
Animals slaughtered,.....	$111.703,142	$212,871.653	$101,168,511
Sheep, No., ...	21,723,220	23,317,756	1,594,536
Wool, lbs..................	52,512,959	60.511,343	7,998,384
Sugar, cane, lbs., ...	237.133,000	302,205,000	65,072,000
Molasses, gallons, ...	12,700,991	16,337,080	3,636,089
Sugar, maple, lbs.,........	34.253.436	38,863,884	4,610,448
Tobacco, lbs.,.............	199,752,655	429,390,771	229,638,116
Wine, gallons, ...	221,249	1,860,008	1,238,759
Hay, tuns, ...	13,838,642	19,129,128	5,290,486
Orchard products, value,.	$7,723,186	$19,753,361	$12,030,175

That this increase is to continue we can scarcely doubt. By turning to the article on the Commerce of the United States, contained in Appleton's just published "Annual Cyclopædia for 1861," which we have already commended so highly—we find that there was a wonderful increase in our shipments abroad, in 1860 over 1859, and in 1861 over 1860. As the crop of 1859, which is the one referred to in the census returns, was not probably exported to much extent until the beginning of 1860, it may be sufficient to compare what we sent abroad during that year, with some of the shipments of '61, to show that we have begun the current ten years well, in point of enlarging our agricultural productiveness:

Exports of Breadstuffs, Provisions, &c., from the United States for the year 1861, *as compared with* 1860.

Articles.	1860.	1861.	Increase.
Wheat Flour, barrels,.....	1,926,202	3,092,049	1,165,847
Corn Meal, do.	89,574	108,385	18,811
Wheat, bushels............	13,538,039	28,757,615	15,319,579
Rye, do.	450	1,000,405	999,955
Corn, do.	3,726,786	12,352,024	8,625,238
Butter, pounds,...........	10,987,495	23,159,391	12,171,896
Cheese, do.	23,252,712	40,041,225	16,788,513
Lard, do.	18,866,178	47,290,409	28,424,231
Tallow, do.	14,895,969	25,820,335	10,924,366
Cut Meats, do.	19,447,163	50,565,732	31,118,569
Pork, barrels, ...	91,650	116,654	25,004

The only article showing a decrease is Beef, of which we exported 29,013 barrels, and 33,924 tierces in 1861, against 40,003 bbls. and 55,328 tierces in 1860.

"The exports of flour and wheat, reduced to bushels of wheat, for 1861, makes 52,756,837 bushels, at an aggregate value of $62,959,473," says the same authority. In other words, we exported in 1861 more than *one-half* the total wheat crop of the country in 1849, and not far short of *one-third* that of 1859.

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☞ The Chenango Co. Fair will be held at Norwich, Sept. 24–26.

☞ From the editorial accounts of the Illinois State Ag. Society's late Trial of Mowers and Reapers at Dixon, as published in the Prairie Farmer and Rural New Yorker, we learn that it excited general interest and considerable competition. The prize awards are not to be declared until the State Fair takes place at Peoria. We have not space for anything more than a very brief notice. There were 17 machines entered in competition for the premiums offered for the best mower, and tested as mowers in competition for the premium offered for the best combined reaper and mower, as follows:

1. Wood's Two-Wheel Mower, W. A. Wood, Hoosick Falls. N. Y.
2. Wood's Jointed Bar Mower, do. do.
3. The Ohio Mower. E. Ball, Canton. O.
4. The Excelsior, Cline, Seiberling & Hower, Doyleston, O.
5. Kirby's Mower, D. M. Osborne & Co., Auburn, N. Y.
6. Curtis' Cam Mower. Geo. P. Curtis, Chicago, Ill.
7. Cayuga Chief, Senior, Sheldon & Co., Auburn, N. Y.
8. Cayuga Chief, Junior, do. do.
9. Manny's Senior Mower, John P. Manny, Rockford, Ill.
10. do. Junior do. do. do.
11. Buckeye Senior. H. H. Taylor. Freeport, Ill.
12. Buckeye Junior, do. do.
13. Rugg's Mower, G. H. Rugg, Ottawa, Ill.
14. Esterly's Mower, Geo. Esterly, Whitewater. Wis.
15. Coggswell's Patent, T. H. Medell, Ottawa, Ill.
16. Seymour, Morgan & Allen's, Brockport, N. Y.
17. McCormick's, C. H. McCormick & Bro., Chicago.

The same machines, with the exception of two or three of the Junior mowers, were put on trial as reapers, either in competition for the premium offered for the best reaper, or for that offered for the best combined reaper and mower. Wood's, McCormick's, Seymour & Morgan's, and Cline, Seiberling & Hower's "Excelsior," were the competing machines as self-rakers. The trial of mowers was commenced July 22d, continued the 23d, and completed Saturday the 26th, the 24th and 25th having been employed in testing reapers, headers, and binders in the grain.

Perhaps the most interesting feature was the trial of the Mowers "under difficulties," that is upon "a field of prairie grass, composed," says one of the accounts before us, "of upland and slough, with a very rough bottom; some parts with large bogs on the borders of the slough; some places the blue grass had fallen the year before and formed a thick mat at the bottom of the blue grass (one of the most formidable things to meet;) other portions had been overflowed and swept down through the lowlands with the severe storm, and the grass left covered with mud and grit—in fact there was everything combined to test the machinery. There was no drawing of lots, each machine was to follow the other around, doing the best it could." All the machines were tried here, excepting Nos. 4, 13, 14 and 15, in our list above; and they all seem to have done unexpectedly well, in view of the obstacles encountered—"now and then cutting off a huge tussock or clump of willows, each machine doing itself credit for its manner of work—some better than others, however—the more lighter machines being more apt to be thrown off their balance, and now and then jump over a spot of grass; the heavier machines and those with the flexible or jointed bars hugged the ground more closely and were not satisfied without the last straw." The task of deciding the awards will be one of no very easy nature. We believe there are to be but two prizes, one on the Reapers, and the other on the Mowers. The Executive Committee of the State Society as we understand it, are acting as their own judges. Their awards will possess the greatest weight, if accompanied by a full and carefully prepared report, detailing the various steps by which their conclusions shall be reached, in such a manner as to throw increased light upon the requisites and efficiency of the Mower and Reaper in their present stage of development, and thus convey instruction to the Farmer, as well as monition and encouragement to the Manufacturer. But whether all this is or is not brought about, such a "field-day" cannot fail to elevate the standard demanded by the Farmer in the machinery he is expected to buy; and the present one appears also to have shown very conclusively that the field of invention in Reapers and Mowers is not yet exhausted; that additional progress is making in them with every successive year, and that the limit of improvement and perfection while thus constantly drawing nearer and nearer, may be still more distant in its final attainment than some of us have hitherto been ready to suppose.

The Grain Aphis Again in Duchess County.—I notice you speak of the Aphis not appearing where he did last year, and sincerely wish we could bear you or rather Dr. Fitch out in the statement; but, unfortunately, the oat crop, which was seriously injured last year, will be damaged *much more* this. I do not know of a single field of that grain in this neighborhood that is not peopled with them. s. t. *Thornedale*, *July* 24.

The Aphis in Vermont.—In the season of 1861, the wheat midge and aphis destroyed some pieces of wheat entirely; some of the grain was literally covered with them. While cutting my wheat, barley, and oats, I noticed they all left the grain as soon as it was cut, and the stubble and grass would be covered over with them, and thousands still crawling on the ground. This day, Aug. 11, 1862, I have examined all the grain that I have, and cannot find the first sign of the rebels. P. K. D.

Grand Isle Co., Vt., Aug. 11, 1862.

Grain Aphis in New-Jersey, &c.—The grain aphis has eaten the oats badly about here. Mine are scarcely worth threshing. Some of the neighbors have escaped. Corn is very backward this year. Fruits and crops of all kinds but oats and clover, which were retarded by a drouth the last of April, are yielding very well. Potatoes show an occasional touch of the rot. My experience in applying coal tar to corn before planting, is the reverse of that of one of your correspondents. On the same field the untarred corn started one week or more earlier than the tarred, and has kept ahead of it. Both kinds had the same treatment otherwise. G. L. *New-Brunswick*, *N. J.*

The Aphis in Genoa, Cayuga Co.—The aphis will not do much injury here this season—nothing in comparison with the last year. This is in the southwest part of the county. North and east I hear of considerable damage being caused by this insect. Last year they were first observed on winter wheat and on barley—then spring wheat and oats—doing very much injury to late sown oats. Early sown grain of all sorts received but little damage, and if the grain arrives at a certain stage in ripening, although covered with the aphis for many days, it receives inconsiderable damage. The opinion is prevalent here that they stay but one year in a place to do much injury, and that they are moving from one region to another. The proper way to avoid injury is to sow grain of all sorts (where they are expected) very early. E. A. King.

☞ At the last meeting of the Upper Canada Board of Agriculture, Messrs. Christie, Burnham, Stone and Denison were appointed Delegates to the New-York State Fair at Rochester.

Large Strawberries.—The editor of the Rural New Yorker acknowledges the receipt of two quart boxes of Triomphe de Gand strawberries, from Ellwanger & Barry-the smallest berries of which measured five inches in circumference. Fifty berries filled the two quarts. Two inches is not an unusual measurement for the longest diameter of well grown berries of this variety.

The Susquehanna Valley Agricultural Society holds its Fair at Montrose, September 24, 25.

Inquiries and Answers.

WARTS.—How can I remove a large, flat bloody wart from a colt's knee—to cut it will injure him, and I cannot cord it. O. A. *Fayette Co., Pa.* [We give Dr. Dadd's remedy:—"A wart having a broad base should be treated in the following manner: Take a common suture needle, and arm it with a double ligature; each ligature is to be composed of three threads of saddler's twine, well waxed; pass the needle right through the center of the wart, close down to the skin; tie each half separately with a *surgeon's knot*, as tight as possible; cut the ends off pretty close to the knot, and in the course of a short time the whole will drop off. A wart having a small circumscribed pedicle may be removed in the same way, by tying a *single* ligature around its base. If the exposed surfaces should not heal readily, moisten them occasionally with tincture of aloes and myrrh; and if they show a disposition to ulcerate, sprinkle them with powdered charcoal and bloodroot, equal parts."]

HARD SOAP.—I have made a domestic experiment which threatens to be a failure unless you will be good enough to give some counsel. Ten pounds of washing soda had been used in making hard soap. To the residuum, (yet standing in the large vessel in which it had been dissolved,) was added five or six pails of water, which settled perfectly clean, and was used instead of soft water to wet ashes set up to leach, and the lye thus procured, (with ten pounds of potash,) was used in an attempt to manufacture soft soap, which has resulted in an unacceptable approximation to hard soap. S. D. [There was still too much soda held by the water in solution—the only "counsel" we can give is to avoid the soda in future for soft soap.]

RATES OF WAGES—WHERE TO GO?—Having been a constant reader of your paper these last two or three years, and seeing in them lately letters from various correspondents containing advice about "how to get a farm," I would beg leave to take your attention for a few moments on this important subject. I with a considerable number of other Canadians in these parts intend coming over to the "States" this fall—all of us with a determination to make homes for ourselves. We all of us understand more or less of farming, though we are entirely bare of capital to go and buy farms with, and what we wish to know is, in what part can we get this capital quickest? Of course we all know that hard work alone will be the surest way of getting it, and what we wish to ask is, would you or any of your correspondents inform us whether it would be more advisable to go to the Western or newly settled states, or the Eastern—also the rates of wages given to farm laborers, together with the kind of agreement usually made for working farms on shares? L. W. *London, Canada West.* [These inquiries are evidently made in good faith, and we hope some of our correspondents will reply.]

FRUIT-TREES FOR THE NORTH.—Where is the nearest reliable nursery from which one could procure fruit-trees likely to do well in this cold climate? I bought some of a New-York nurseryman, with others of this place, a few years since, and but very few of the trees are now alive. All the old orchards that a few years since looked well, (treatment and climate considered,) are fast dying. Are there any *very hardy* and *good* varieties that would be likely to succeed in this part of the State, and farther north? And do you know of an eastern nursery as far north as this? J. H. F. *Whitefield, Coos Co., N. H., July* 15. [It is of less importance to obtain the trees from a northern nursery than to procure hardy varieties. A tree, properly grown in Southern Pennsylvania, on a dry soil of moderate fertility, with well-ripened wood, may be more suitable for Northern New-Hampshire, than one grown in New-Hampshire itself and over-fed with manure, and with a late succulent growth. Vigorous, hardy trees, with the shoots fully matured and hardened, are better than feeble and stunted ones; and a dry soil effects such ripening more perfectly than a wet or moist one. Among northern nurserymen, we may name John W. Adams of Portland, and S. L. Goodale of Saco, Maine; R. T. Robinson of Ferrisburgh, Vermont; and John W. Bailey of Plattsburgh—all of whom, we doubt not, are reliable, and understand the wants of the far north. Among harhy varieties of the apple, we would name Red Astrachan, Sops of Wine, Oldenburgh, Autumn Strawberry, Fall Orange, Fameuse, Winesap, St. Lawrence, and Jonathan. Among hardy pears, are Flemish Beauty, Buffum, Fulton, Urbaniste, Lawrence, &c. If the trees grow on dry bottom, and growth be given to them by good cultivation, and if in addition, shelter be provided against cutting winds, they may succeed well.]

WHITE RASPBERRY—CHIP MANURE.—Would rotten chip manure be beneficial to strawberries, and young fruit trees in a nursery? Is not the American White or Yellow raspberry worthy of cultivation? We found some plants in an old field several years ago, and transplanted some of them into our garden, where they seem to do well. They are as large as the Black Cap, which we procured from Mr. Doolittle of Oaks' Corners, N. Y. The bushes are very full of berries, which are just ripening. F. A. F. [Chip manure may be valuable, useless, or hurtful, according to circumstances. If old and well rotted, it will be useful in all soils that are improved by the addition of vegetable matter, if well worked in and intermixed. On a hard clayey soil, it may serve to loosen it, even if fresher and not rotted. The same treatment would injure a light soil. Chips, if not coarse, may serve as a good mulching for newly transplanted trees. As a general rule, for all purposes, use it if fine and rotted, discard it if fresh and coarse. The "American White Raspberry" was formerly considerably cultivated, but has of late years given way to ranker growers which multiply more readily. We think it worthy of attention, and know of no sort with so agreeable a flavor.]

ROT IN CHERRIES.—Can you tell me of any way to prevent cherries rotting on the tree, mine have rotted badly? B. C. [It is the result of wet and warm weather. By planting the trees where there will be a free circulation of air the evil will be lessened, but the best way is to select such varieties as are least liable to rot. High flavored, rather acid sorts are least affected, and sweet varieties most—as a general rule. The Black Tartarian, which is almost free from any acidity, which bears profusely, and the fruit of which is commonly shaded by heavy foliage, retains moisture a long time, and is very apt to rot. Elton and Governor Wood, which have open spreading heads, are less liable. Sour cherries, such as the Early Richmond, Belle de Sceaux, and common pie cherry, scarcely ever rot, even in weeks of wet weather. The more acid heart varieties, such as Dr. Kirtland's Red Jacket and Tecumseh, do not rot so readily as most heart cherries. These being hardy trees, they are likely to prove valuable for marketing. The same rule holds true with many other small fruits. The cherry currant, for example, is too sour to suit most palates, but is preferred by some cultivators on account of its hanging long on the bush, its sourness preventing rotting, and its size shrivelling.]

PEACH-LEAVED CAMPANULA.—The plant sent by "Constant Reader," judging from the meagre and injured specimen, is the white variety of *Campanula persicifolia*, a commonly cultivated and handsome perennial. There are some of the many species of this genus that have not bell-shaped flowers, but most, and those especially from which the name was given, have this form.

TREATISE ON SHRUBS.—Please inform your readers what is the best descriptive work upon ornamental shrubs and oblige A SUBSCRIBER. [There is no good work on the subject. Perhaps the best small work is Breck's Book of Flowers, one-third of which is devoted to some account of trees and shrubs.]

RINGING BULLS.—Is it considered advisable to *ring bulls?* Does the operation have a tendency to make the animal more docile and tractable, or is the ring inserted merely for the purpose of easy leading? How is the operation performed, and what is the proper age? B. A. *Rock Spring, Penn.* [Will some of our large cattle raisers give their views? We have supposed that the ring which is merely inserted *in* the nose, and not through the flesh, the best, as being more humane—what does experience say?]

YELLOW CLOVER.—The plant forwarded by "Young Inquirer" of South Berwick, Maine, is the yellow clover, an introduced plant of little value, and generally regarded as a weed.

PEELING WILLOW BY MACHINERY.—We have a willow forest, and have been peeling the willow by hand; finding that too big a job, we are anxious of getting a machine. If you know of any such machine, will you give us the address of the manufacturer or the salesman, and if you know personally of them, will you please give us your preference? J. R. R. & CO.—*Pittsburgh.* [We do not know of such a machine—if our readers do will they please reply?]

FOOT AIL.—A remedy for foot ail is inquired for in THE CULTIVATOR, and I would prescribe as a sure remedy, spirits of salts, (muriatic acid.) A teaspoonful, applied to the diseased parts once in two or three days, for half a dozen times, will cure its worst form, and a single application taken in season, will often be enough. Farmers, please try it, and let me hear from you. The milder form, or scratches as it is often called, which often appears on horses as well as cattle, may easily be cured by the application of pot fat, or lard well saturated with salt. The former is best. Both sure remedies in this vicinity. Every farmer should keep the former by him. A Reader of The Cultivator. *Milford, Ct.*

The Homestead Law.—I see in the August number of The Cultivator, an inquiry about the "Homestead Bill," its provisions, where public lands are situated, &c., &c., which you have answered in the main correctly. If not trespassing too much I would like very much to give some information to those seeking "free homes," through the medium of your excellent paper. To be as brief as possible, I would refer parties to your August number, as to *who* can take the benefit of the "bill." Now as to the location of these lands: Certain railroads have lands granted for their construction—to wit: every alternate *even* numbered section, within 6 miles of the road is retained by Government, and is held at $2 50 per acre, while every alternate *odd* numbered section is donated to the railroad, so that one can enter the even numbered section *within* the six mile limit, at $2.50 per acre, or take 80 acres under the "Homestead Bill." Outside of this limit one can enter for $1.25 per acre, or take 160 acres under the said bill or act. (I see that you had it within *fifty* miles of the road, an error in printing I take it.) Large quantities of Government lands are still vacant and unappropriated in this part of Wisconsin, to wit: in what is called the "Chippewa Land District." Location of land office is Eau Claire, Eau Claire Co., Wis., a town of 2000 inhabitants. Good land can be got within 12 miles of this place, within ½ to 3 miles from good settlements, schools, &c. Land is well watered; prairie and heavy timber. Climate about same as central New York and Massachusetts; pleasant winters and very healthy, no fever and ague. The country is rapidly settling up with New York and New England people. Any letters of inquiry directed to H. C. Putnam, County Surveyor, Eau Claire, Wis., from any of your subscribers, will be cheerfully answered, giving all necessary information. We communicate with the east via Chippewa and Mississippi river by steamboat. H. E. P.

Eau Claire, Wis.

Age of Sheep.—Can you or some of your correspondents give a simple and reliable rule by which the age of sheep may be ascertained? A Subscriber. *Kingston, N. Y., July* 27. [The lamb, when dropped, has two small incisor teeth in the lower jaw, sometimes none, and others appear in a few weeks. These are temporary teeth. In the second year, the two central ones drop out and are succeeded by two broader and larger ones, the permanent teeth. In the third year, two more drop out and are succeeded by two more large ones, making four in all. The fourth year there are six broad teeth, and the fifth eight, or a full set. This general rule, however, has considerable exception, as the permanent teeth sometimes appear earlier. After five years there is no accurate mode of judging the age, and an estimate can be made only by those who have had considerable experience, by their being worn down or broken.]

Can the Potatoes be Saved.—I have been promising myself the pleasure of sending you some *Colebrook seedlings*, a new fall potato, originating in Connecticut, and, I believe, unknown to the public generally. It is a large, oval, smooth red-skinned potato, having the eyes directly on the surface, a great point with the potato peeler. I planted five cut potatoes, whose product grew finely until the latter part of July, when the leaves turned brown, apparently from the attacks of a small black bug which covered them in great numbers. I fought them with lime, ashes, manure-water, &c., but in vain. The tops died down, and I pulled them up. The potatoes are half or two-thirds grown. What shall I do with them? Leave them in the ground or dig them up? W. H. Coleman. *Orange Co.* [Is our correspondent sure that it is not the rot which affects his potatoes? In that case, we should think it the better way to dig them at once.]

The Grain Aphis.—I notice in your issue for August, an inquiry in regard to the presence of the grain aphis in different sections. I have a small piece of wheat which has been covered with them as thick as the wheat in this section was last year; they came on early, as soon as the heads of the wheat began to show; they have now entirely disappeared. I also noticed a few on my oats. Any facts in regard to this insect will be of interest to farmers in this section? E. W. *Torringford Conn.* [A very full account of the Grain Aphis from the pen of Dr. Fitch, may be found in the Country Gentleman for August 15, 1861, p. 114—also in the Transactions of the N. Y. State Ag. Society, 1860, pp. 833-840.]

Kerosene for Lice on Cattle.—I can add my testimony to that of one of your correspondents regarding the efficiency of kerosene oil, in expelling vermin. A dog in a wretched state of body and mind, by reason of flees, was thoroughly washed in the oil, and the enemy skedaddled. Would it not be good for lice on cattle? W. H. Coleman.

Orange Co. Aug. 7.

Willow Peeler.—Answer to inquiry in last Number:—Matthew Easterbrook, jr., of Geneva, N. Y., has invented and patented an excellent willow peeler. Any information concerning it may be obtained by addressing him as above. V. P.

Refuse Pulp from Cider Mills as a Fertilizer for Apple Trees.

M. Frere Henry of Rennes, in an article communicated to the *Abeille Pomologique*, mentions the following interesting facts:

For fifteen years he remarked that apple trees, the lower part of whose stem was covered with cider pressings, spreading out from a large adjoining heap of that material, made double and treble the growth of trees that were not so circumstanced.

More recently, between old and extremely exhausted willow stools, there was spread about nine inches thick of old marc, or cider pressings. In the same year of the application this produced an extraordinary effect. Those Willow stools, which for many years had produced only weak twigs, scarcely worth the expense of cutting, pushed with great vigor, and have since continued to do so. In consequence of these observations, he determined on turning to account, as manure for fruit trees, an enormous heap of marc which blocked up the way. He asked the opinion of some fruit growers; but they said the marc would burn the roots. However, in the beginning of February, observing that the pips were beginning to germinate all over the surface of the heap, he concluded that if the radicles of the embryo were not burned, it was not likely that older roots would be injured, and did not hesitate to apply the manure to four hundred apple and pear trees, in the following manner:

In February, 1859, he removed the soil from around trees, trained as pyramids and as vases, to the distance of a radius of twenty-one inches, and as deep as the principal upper roots. He then put to each tree three or four forkfuls of marc, pressing it down with the foot, and covering it slightly with a portion of the removed soil, the remainder of which was spread on the borders. As marc is very retentive of moisture, and at the same time a good conductor of heat, which was excessive in 1859, numerous roots were speedily formed in its slowly decomposing substance. "Even this year," says Mr. Henry, "although rather colder than usual, the effects of the impulse given as above to vegetation is remarkably apparent. The stems of fruit trees have become clear of Lichens and Moss; and latent buds, from the abundant flow of sap, were readily developed on making an incision where branches were wanted to be called into existence. Bad growers, such as the Mouillebouche and Bezi de Caissoy Pears, were thus made to present a regular vegetation.

"But a fact to which I would wish more particularly to draw attention is, that some delicate varieties of which the fruit is apt to crack, for example, the Beurre d' Aremberg, or Glout Morceau, Doyenne Roux, Beurre Gris, &c., now produced fruit perfectly smooth and sound.

"In conclusion I am justified by my own experience, in saying that I can confidently recommend the use of the marc of apples as a manure for fruit trees, and thus turn to good account a substance which many allow to go to waste, not even taking the trouble to mix it with the dung in the manure heaps.

"Before using the marc it would probably be advisable to throw it up in a large heap so as to induce fermentation in order to disengage certain acid or other principles; and then apply it to the trees when the germination of the pips takes place, that is, in the month of February. Fruit trees in gardens, and doubtless also those in fields, treated as above detailed, would repay the labor a hundred-fold."—*Genesee Farmer.*

HICKOK'S PATENT PORTABLE KEYSTONE CIDER AND WINE MILL.

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Full of GLOSTER and OXFORD blood, will be sold on reasonable terms. Apply to FRANCIS MORRIS,
July 17—w&m3mos. Throgs' Neck, Westchester Co., N. Y.

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Florence Nursery, Florence, Mass.

June 12—w1yr.*

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The subscriber offers for sale, at reasonable prices, a number of Short-Horn cows, heifers and bulls, of Bates' blood, and in prime condition, and also a few pure and high grade Alderney cows, heifers and bulls of the best blood in the country, delivered at the cars in Albany free of charge. Address Dr. HERMAN WENDELL,
Feb. 13—w&mtf. Hazelwood, Albany, N. Y.

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The selections are made only from pure bloods, and chiefly from premium animals which have been uniformly successful at our local Fairs. He refers to purchasers from him in all sections of the Union.
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Feb. 14—wtf. 1120 Market-street, Philadelphia.

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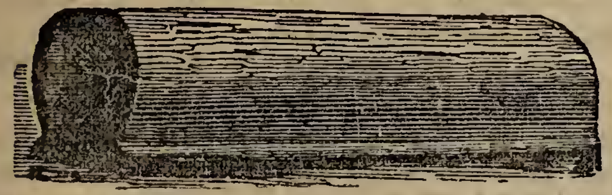

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I guarantee the purity of my Queens. C. WM. ROSE,
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Aug. 28—w6tm1t. Chicopee, Hampden Co., Mass.

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Sept. 1—m2t. Torringford, Litchfield Co., Conn.

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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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The Cultivator & Country Gentleman.

SCATTERED NOTES OF TRAVEL.

Rochester and Vicinity.

A brief jaunt to Rochester and vicinity afforded an opportunity to observe several objects of interest, which the readers of the COUNTRY GENTLEMAN may like to hear. In visiting most of the large nurseries, the effects of the war were plainly visible in the diminished energy which they generally exhibited. The owners do not expect the sales they made two years since, and are unwilling to employ so large a force. Weeds were consequently not quite so rare as formerly—some nurseries, indeed, showed them in rather formidable aspect. There are, nevertheless, a vast number of fine saleable trees, single establishments having many hundred thousands. HOOKER and FARLEY of Brighton, showed me a block of some 200,000 apple trees of excellent growth six or seven feet high, their grounds altogether comprising a hundred acres or more actually under nursery trees. H. S. HOOKER & Co., have a promising young growth of pears, cherries, and apples. ELLWANGER & BARRY still keep up their immense 500 acre establishment. Although they are now doing more than last year, they have diminished their previous force, having reduced the number of their hands to one hundred and thirty for the summer. Their home grounds even exceed in beauty and finish the appearance of former seasons. I have never seen a softer velvet than their lawns exhibit, which are cut by means of Swift's Lawn-Mower with a more perfect finish than could ever be done by hand. The long walk, extending a half-mile from their office to the rear grounds, and which is about 10 feet wide, appeared like a polished green ribbon. Phloxes, verbenas, gladioli, tiger flowers, &c., were in large masses on either side, and afforded a brilliant display. This lawn-mower operates entirely different from a common mowing machine, consisting essentially of a cylinder of knives (somewhat resembling those of a straw-cutter) which is made to revolve backwards with great velocity in a hollow bed, which slides over the surface of the ground, and giving a cut less than half an inch high. The surface of the ground must of course be very smooth, and grass over two inches high cannot be cut. Hence the owner is *compelled* to keep his lawn closely sheared. The feet of the horse which draws it, are shielded so as not to bruise the turf; and the machine cuts a strip of grass about two feet wide. Its cost is $55.

Many kinds of hedge plants are under trial on these grounds—the honey locust promises well as a hardy plant. A dense screen of Norway spruce eight feet high, has been formed in a few years by planting the trees a foot and a half apart. A portion of the grounds is subdivided into small compartments, the subdivisions formed of arbor vitæ hedges, which serve as an excellent shelter to tender plants from cold and cutting winds. The bearing dwarf trees, of which there are thousands, still exhibit their vigor and productiveness. The owners have resorted to the jarring system to save their plums. Several hundred trees were loaded with this fruit. Two men were employed two or three hours each day in jarring the insects on the spread sheets. They find the Primordian the best *very early* sort—it was nearly past its season; St. Etienne, a fruit somewhat resembling it, but larger, was fully ripe; and Precoce de Bergthold beginning to mature. On older trees, with less vigor of growth, these sorts (as well as other fruits) would be a week or two earlier. The last named variety is stated by Downing to be as early and better than the Primordian; but the experiment here shows it to be some two weeks later. The Early Orleans and Royal Hative had scarcely begun to ripen.

At Rochester, as elsewhere, there is a profuse crop of nearly every kind of fruit. Apricot trees were observed in different parts of the city, bending under loads of ripe fruit. Nearly all appeared to be the Breda, the only hardy, reliable sort raised here. The curculio has appeared in diminished numbers—having starved last year, as some suppose, for want of a crop to live in. There are nevertheless plenty yet left, for all practical, destructive purposes. Apricots sell at about five dollars per bushel in the city; early apples at only one dollar per barrel. Land owners, however, do not fear to plant orchards of winter varieties. Well grown, well selected, and well packed specimens, that dealers can *rely* on as good, still command encouraging prices. Hooker and Farley showed me five trees of the Baldwin, from which they had sold in one year seventy dollars worth of apples. On my way from Macedon to Walworth, I rode past an orchard of about 150 trees which I had seen planted eight years before, the heads now ten feet in diameter, and in full bearing. Two seasons ago, or the sixth year, this orchard bore forty barrels, besides a supply of sweet varieties not measured. It had been cultivated with beans, potatoes, and corn, and more recently the ground had been top-dressed. It was planted by a man then *seventy-eight years old*, and now he is in full health and vigor enjoying the fruits. At T. G. Yeomans' of Walworth, are large orchards of Baldwin apple trees, many of which have averaged two to three barrels each tree, at six years from setting out.

Yeomans' Nursery and Orchards, Walworth.—The readers of the Country Gentleman have heard the fame of these grounds. They are as flourishing as ever. There are eleven acres of dwarf pear orchards, and 120 acres of other fruits, mostly apples. About 100 acres are in nursery, a large share of which is dwarf pears. The dwarf pear crop promises to be a good one the present year. The most remunerative part is a third of an acre, which bore a crop two successive years, the first selling for $400, and the next $500—$900 in the two years. The trees are 10 feet apart, and are cultivated with a two-horse team. They have now become so large that it is difficult to pass two horses, and 12 feet distance is preferred. The round form of training is preferred to the pyramidal. Some beautiful, nearly globular, or rather hemispherical headed trees were observed. They are pruned annually in winter or spring, and manured every two or three years. The Bartlett and Flemish Beauty are both cultivated as dwarfs to some extent, but are always double-worked. The proprietor differs from most as to the height of the heads in young orchard apple trees. His rule is *six feet* of clear bare stem before the branches of the head commence. This allows the horses to pass under freely, to give thorough cultivation which so largely contributes to his success. When the trees are large and bear heavy crops, the long branches, even at this height, are brought down to the ground. Those who prefer such tall-topped trees will ascribe his success to this practice; while others, who prefer low heads, will look upon the excellent culture which the trees receive, as sufficient to insure success, even in spite of an objectionable form of training.

In a nursery like this, where dwarf pears form a large part, it is essential to have a good supply of manure. A large amount is therefore purchased yearly and manufactured into compost. Swamp muck has been extensively employed. One-tenth to one-twentieth of ashes is also added. When muck cannot be obtained, ashes alone have been used, and are regarded as one of the best applications to prevent the waste of volatile parts—whatever theory may be, this is the opinion derived from experiment. The manure has to be drawn several miles, mostly from Palmyra and Macedon, and costs when deposited on the land about a dollar and a half per load. In one year, $1,800 were expended for manure. About 30 hands are employed during the season, and 60 or 70 during the digging and packing season.

Grounds of E. W. Herendeen, Macedon.—It was interesting to observe the growth of trees formerly planted on these grounds by the writer of these sketches. A *Black apricot*, standing on a hard gravelly spot, where it could not be cultivated, was still healthy and in a growing state. It is some 25 years old, and is 9 inches in diameter. Being in a remote part of the grounds, the curculio had always taken every fruit. This year a limb was sawed off to strike against for jarring the insects down—an expedient essential for a tree of this size. It was jarred daily and 170 insects caught and killed, and a moderate crop saved. This apricot, as is well known, is a different species from all others, and is as hardy as a maple. The fruit is not so good, but some prefer it, and when fully ripe is very pleasant and agreeable, while it has a rich handsome appearance. A *Washington pear* tree, standing near this apricot, on similar ground and under like treatment, is growing vigorously and bearing profusely. It is 7 inches in diameter, and has borne a good crop for many years without a failure, averaging about one barrel of fruit yearly. A few rods distant, a younger tree of Osband's summer pear (some 15 years old,) was bending under a heavy load of fruit, just beginning to ripen. No two varieties can probably excel the Washington and Osband for light gravelly soils and neglected culture; and those who cannot be persuaded to give their trees any culture whatever, would do well to plant these sorts for market, although they would doubtless be much improved in size by better care.

The difference in soils as affecting the growth of the pear exhibited in different regions, possessing nearly equal degrees of fertility for other purposes, is sometimes very striking, and is especially conspicuous in comparing the soil of Macedon, formerly occupied by the writer, and that of Union Springs, cultivated at the present time. Both grow equally good crops of wheat, corn, potatoes and grass, and such young fruit trees as the apple, peach and cherry. Young plum trees on anything else than the Canada stock can be scarcely grown at all at Macedon; while at Union Springs all sorts grow luxuriantly. At the latter place standard pears in the nursery are as large in two years as in ten years at the former place. Dwarf pears, on the contrary, grow best at Macedon. E. W. Herendeen showed me a block of 20,000 of these, which in two years had, without any manure, attained a height from five to seven feet, after cutting back for perfecting a good form, while beside them standard pears were feeble and unpromising. At Union Springs two years' standards, without manure, are often seven feet high. It is generally supposed that a large portion of clay is essential to the successful growth of the standard pear. This is partly corroborated by the fact that the soil is generally light at Macedon, and heavy or clayey at Union Springs; but this cannot be the whole reason. For in certain spots in the last named locality, marked as *quite sandy*, the standard pears grow as vigorously as in hard adhesive clay. The peculiarly favorable quality appears to belong to the whole region, and not to be influenced by the proportion of clay in the composition. In other regions, not so favorable, where certain spots are so clayey as to show numerous hard clods, these trees grow no better than on lighter portions of ground. While therefore, as a general rule, clayey regions are best, yet the whole influences do not appear to be yet fully ascertained. It is a question for further investigation.

An accidental experiment with irrigation in this neighborhood furnishes confirmation of the opinion of A. B. Dickinson on the advantage of spreading a thin layer of washed soil over the surface of grass lands, as a sort of mulch. An alluvial meadow of four acres, which I have known for more than twenty years, and which was never plowed during this period, has generally cut about two tons of hay per acre. It is very rarely overflowed, and has of late years rather declined in its crop of hay. But an extrordinary flood from Mud creek deposited about an inch of fine mud over its whole surface. This mud was merely the washed soil from the country above. The consequence of this deposite was a doubling of the crop of hay, which was nearly four tons per acre the present year. E. W. Herendeen informed me that he drew 13 very large two-horse loads of hay from the four acres, each load being fully equal to such as he has weighed at 2,800 pounds each, which would make 15 tons for the four acres, or 3¾ tons each. J.

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The Agriculture of the State of New-York.

IS IT RETROGRADING OR ADVANCING?

The Census returns of our *Agricultural Productions in the State of New-York*, for 1860, afford some interesting results as compared with those of 1850. As they relate to the crop of only a single year in either case, which may have been a particularly bad or good season, and therefore not a fair standard for nice comparison, and as they are open to errors in many other respects,—the details they give us are not to be received with too great confidence; and yet they supply some information which we could obtain in no other way.

Farm Implements and Machinery during ten years past, have been constantly employed to a greater extent upon our Farms. While the surface of "improved land" in the State has been increased less than *one-sixth*, the value of the implements employed in its cultivation, has advanced *one-third*, or in fully a double ratio. This increase is from twenty-two millions dollars in 1850, to twenty-nine in 1860—an increase averaging $700,000 *each year*, expended by the farmers of the State of New-York in new implements and machinery, beyond making up for the wear and tear of old ones. In 1850, our farmers had $177.97 worth of implements, &c., to each 100 acres of improved land, against $202.87 in 1860. In the accuracy of these figures we have no very great confidence, because there must be a great deal that should properly be included under this head, which the farmer does not stop to estimate the value of, when he hands in his census returns; but as they are probably *equally complete at both dates*, we may safely conclude that the *increase* is not overstated. It may be added that our associate, Mr. Thomas, (see *Rural Affairs*, vol. 2, p. 131,) estimates the value of implements, wagons, &c., necessary for the proper management of a hundred acre farm, all improved land, at $474.50, and this does not include a mower or reaper. The common estimate in England varies from £1 to £2 per acre, or from $5 to $10, and even considerably more where steam machinery is employed.

Wheat Culture.—The number of bushels of Wheat raised in this State in 1860 was 8,861,099, against 13,121,498 in 1850, and 9,092,402 in 1855. The first return of the crops of the State was in 1840, when our wheat crop was 12,286,418 bushels. We fail to see in these figures anything calculated to awaken such fearful despondency as some writers have fallen into with regard to the "decline in our Agriculture." They are *all the figures we have;* anything relative to larger aggregate crops in earlier years, is simply an estimate with no basis of truth to rest upon, and with nothing whatever to *prove* that the average yield per acre *was ever larger than it is to-day.* — — — By the above figures we see that our wheat crop was larger in 1850 than in 1840, although the difference is perhaps no more than enough to prove that we certainly were not *declining;* for the ten years from 1850 to 1860 there is a large decrease, which mainly took place during the first half of the decade, at a time when the great West was in the most rapid course of development, and when at the same time the insects were consuming our crop at a rate perhaps unparalleled before or since. Under the circumstances the only matter of surprise is that our wheat crop has maintained itself so well; and the fact that it has done so, against both Western competition and insect depredators, is something to be proud of rather than to mourn over. — — — And what does the decrease in the wheat crop for the last ten years, amount to? In bushels it is 4,440,399—in dollars and cents probably a little short of $5,000,000. Now the increase in the annual value of the produce of our market gardens, alone, is about $3,400,000; add increase crease in potatoes, rating them at 20 cents a bushel, and, in these two items alone, we have made up the loss in our growth of wheat with five or six hundred thousand dollars over! But every other kind of grain than wheat has increased; against a loss of 4½ millions bushels of wheat we have *a gain* of over 2 millions bushels of Indian corn, 8½ millions of oats, and over 2 millions in rye, barley, peas and beans.

Our Live Stock is valued at $103,856,296 in 1860, against $73,570,499 in 1850, an increase of $30,285,797. This is equivalent to a capital invested in Live Stock by our farmers averaging $722 for every 100 acres of improved land in 1860, against $593 for every 100 acres of improved land ten years before. The estimate of Mr. Thomas (see above reference to *Rural Affairs*) was $1,010 per 100 acres as the necessary investment for Live Stock, and the English estimates run all the way from £2 to £6 per acre, or from one to three thousand dollars per 100 acres. — — — Our Milch cows have increased in number more than one-fifth; working oxen and other cattle, as well as sheep and swine, have fallen off, but the value of animals slaughtered has nevertheless increased fully *one-sixth*, and our production of Butter has been enlarged *almost* 30 per cent. The quantity of cheese made, shows a small decline. Taking the equivalent in cheese and butter, and comparing the total production with the reported number of milch cows in the State, we have 103.4 lbs. of Butter as the average production per cow in 1850 against 106.1 lbs. in 1860—a small change, but, such as it is, in the right direction.

Is the Character of our Stock Improving?—We think the Census returns afford ample proof of a gratifying change in this direction—a change showing that where we have discarded in number, we have advanced in quality. While the total number of live stock of all kinds, is returned at only 6,006,494, in 1860, against 6,797,109 in 1850—a decline of nearly 800,000 head, or more than ten per cent., the value is reported as aggregating a sum 40 per cent. greater than ten years ago. Throwing the horses out of the calculation, we have 5,501,206 cattle, sheep and swine in 1860, against 6,349,132 in 1850, or a reduction of over 13 per cent.; but the account with them stands as follows:—

Value of Animals Slaughtered, 1860,	$15,841,418	
do. do. do. 1850,	13,573,983	
Increase,		$2,267,435
Value of Butter at say 15 cents per lb., 1860,	$15,464,591	
do. do. do. 1850,	11,964,914	
Increase,		3,499,677
Increase in Meat and Butter obtained,		$5,767,112

CONTRA—Decrease in Wool grown. 616,828 lbs., say at 40 cents to give a liberal valuation	$246,731	
Decrease in Cheese, 1,193,125 lbs., say at 6 cents	71,587	
Decrease in Wool and Cheese		318,318
Net increased Annual Revenue from the Live Stock of the State		$5,448,794

In other words, take cattle, sheep and swine altogether, and they yield us a dollar a head all around better than ten years ago, and an aggregate five millions and a half of dollars greater, while we have nearly a million of them less to look after. If there is any reliance whatever to be placed on our Census returns, and even allowing that in some unaccountable way the census-takers of 1860 may have been animated by a spirit of exaggeration which did not influence their predecessors in 1850, we cannot yet avoid the conclusion that our breeders of improved stock have done a vast work for the Agriculture of New-York during the decade just concluded.

As an illustration in detail, of the facts represented above in gross, take the sheep: We deduct above for a diminished yield of wool, but the figures prove that it is now a *much better yield per head* than in 1850. The number of sheep reported, young and old, together, in that year, was 3,453,241, yielding 10,071,301 pounds of of wool, or an average per head of 2.91 pounds. In 1860, there was a total of 2,617,855 sheep, and a yield of 9,454,473 pounds of wool, an average per head of 3.61 pounds; and a comparison of these figures shows what is almost a remarkable coincidence, between the ratio of decreasing numbers and increasing weight of fleece—the sheep showing a decrease of 24 per cent. in number, and the wool an increase of 24 per cent. in weight, per head. Thus while the number of sheep has fallen off about *one-fourth*, the actual yield of wool only exhibits a reduction of something less than *one-sixteenth.*

We derive the foregoing conclusions from the abstracts of the Census returns of this State (Agricultural) to be published in the forthcoming Volume of the Transactions of the State Ag. Society. Col. JOHNSON has prepared to accompany them, the table quoted below, showing an

INCREASE IN THE FOLLOWING AGGREGATES AND PRODUCTIONS SINCE 1850:

Improved acres of land, increase in 10 years		1,972,427
Cash value of farms,	do.	$248,796,951
Value of farm implements,	do.	$7,081,769
Horses, number of,	do.	56,721
Asses and mules, number of,	do.	590
Milch cows, do.	do.	192,310
Value of live stock,	do.	$30,285,797
Rye, bushels,	do.	638,702
Indian corn, bushels,	do.	2,202,648
Oats, bushels,	do.	8,622,319
Tobacco, lbs.,	do.	5,681,393
Cotton, lbs.,	do.	280
Peas and beans, bushels,	do.	867,698
Irish Potatoes, bushels,	do.	11,049,027
Sweet Potatoes, bushels,	do.	1,895
Barley, bushels,	do.	601,608
Buckwheat, bushels,	do.	1,942,350
Orchard, products,	do.	$2,064,430
Wine, gallons,	do.	52,232
Market gardens, value products,	do.	$3,381,596
Butter, lbs.,	do.	23,331,185
Clover seed, bushels,	do.	18,710
Hops, lbs.,	do.	7,119,243
Flax, lbs.,	do.	573,899
Maple sugar, lbs,	do.	458,974
Molasses, gallons,	do.	55,312
Molasses, sorghum, gallons,	do.	265
Beeswax and honey, lbs.,	do.	734,240
Value of animals slaughtered,	do.	$2,267,438
Population,	do.	783,334

Decrease of the following productions since 1850.

Working oxen, number,	97,807
Other cattle, do.	39,569
Sheep, do.	835,286
Swine, do.	108,074
Wheat, bushels,	4,440,399
Wool, lbs.,	616,828
Cheese, lbs.,	1,193,125
Hay, tons,	164,011
Grass seeds, bushels,	14,821
Flax seed, do.	978
Silk cocoons, lbs.,	1,515
Home-made manufactures,	$562,486

There are some other facts proven by this table, to which attention might be called. One of them is the large increase manifested (over two million of dollars) in the Orchard products of the State. Another is the revival of the potato crop, owing doubtless to the gradual diminution of losses from the rot: the potato crop of the State in 1840 was reported at 30,123,614 bushels; in 1850 it was scarcely one-half as large, viz., 15,398,362 bushels; in 1855 it was still somewhat smaller, 15,191,852 bushels; but during the five years to 1860 it had taken a new start, and amounted by the census of that year to 26,447,389 bushels.

It will also be noticed that there is an increase in the area rated as "improved land," amounting to nearly two millions of acres for the past ten years, or 16 per cent. upon the 12,408,968 acres reported under this head in 1850. We have been at the pains to make a careful money estimate of the items in the above table, showing an increase and decrease respectively, with the details of which we need not now trespass upon the patience of our readers. Suffice it to say, that the net pecuniary returns of the agriculture of the State, are thus proven to have increased in just about the same ratio as the extent of land which we are cultivating—showing conclusively that if the returns of our crops per acre are not enlarging as we wish they might, we are fully keeping them up on our old lands, and constantly adding a considerable surface every year to their extent. This, it must be added, is done—probably by the aid of our improved machinery and implements—with little or no addition to the *farming population* of the State, for that is nearly stationary, the increase of three-quarters of a million during the past decade having been confined almost wholly to the enlargement of our cities. The exhibit, on the whole, should therefore be considered a gratifying one to the Farmers of the "Empire State."

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[For the Country Gentleman and Cultivator.

REMEDY FOR FOOT ROT.

Last spring my sheep were very much troubled with the foot ail—some of them were so bad that they lay down all the time. Not knowing at the time what to do for them, I merely washed their claws with castile soap, and then rubbed tar on their hoofs. I soon found this done them no good, and I then turned to a back number of the COUNTRY GENTLEMAN, where I found a correspondent recommend the chloride of lime for this disease. I immediately procured the article, and after two or three applications their feet were perfectly well. I see no reason why this remedy would not be equally good for the diseased feet of cattle. The information given me by this little recipe was worth far more than a year's subscription to your very valuable COUNTRY GENTLEMAN.

New Castle Co., Del. G. S.

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[For the Country Gentleman and Cultivator.]

REMEDY FOR FOOT AIL.

I noticed in the last number, a remedy from W. G. W. for what he calls "foot ail in cattle." I conclude that he means the foot ail that is frequently called "fowls," being a disease between the hoofs, and in some sections is very troublesome. Let those so troubled treat the disease as they would the *itch.* Make an ointment—half an ounce red precipitate, mixed with four ounces lard, and apply it to the diseased parts. One thorough application will be sufficient. It can in most cases be done by rubbing it in between the hoofs with the finger with but little trouble. S. S. W. *Herkimer Co., N. Y.*

THE MULTIPLICATION OF WEEDS.

On all parts of the landowner's premises weeds are now beginning to ripen their myriad seeds. Very few can say they have none. And while they have any at all to increase and multiply, it is hard to say how many millions there may be another year. These remarks apply more particularly to annual weeds, increasing solely by their seeds.

We have just made an examination of the number of seeds which some of the more common annual weeds ripen on a single plant. The green Foxtail grass varies from 3,000 to 4,000 seeds; the brown Foxtail 1,000 to 2,000; the cock's foot Panicum about 2,000; the Rag-weed, or Ambrosia, often 15,000; the Pigweed or Amaranthus, 5,000; and the Lamb's-quarters, also called Pigweed, (chenopodium,) often at least 20,000. We lately rode past a "garden" where there were plants of the latter at least seven feet high, and the number of seeds which each bore must have been at least 50,000 to 100,000. *A single plant would thus seed ten acres*, allowing one plant to every two feet square! Many farmers wonder where all the weeds come from—they cannot conceive how so many should have become mixed through the soil, and some consequently insist that they grow without seed, spontaneously. Let us examine a moment, and see if so improbable a cause is necessary to account for their vast numbers:

In a late number of the COUNTRY GENTLEMAN a series of recent experiments by one of the editors is given to show that by burying such coarse seed as wheat six inches deep, they would scarcely grow; and beans at that depth would not grow at all. When we come to such small seeds as those of pigweed, foxtail, &c., where from 20 to 50 are required to equal the bulk of a single grain of wheat, we may at once perceive that they would not vegetate unless very near the surface. The soil might therefore contain a vast number in a dormant state, ready to spring into wild luxuriance, as soon as the plow throws them up to the surface.

But if the soil were so full of these seeds, would we not at once perceive their presence all through it in working it with the plow, spade or hoe? Let us look a moment at this question. A bushel of pig-weed seed contains over 50,000,000—10,000, as we have shown, would seed an acre, or a bushel 5,000 acres. But we will be extravagantly liberal, and give a bushel to only one acre—enough for a dense growth of eight plants to every square inch. Yet a bushel is only one-twenty-thousandth part of the bulk of the soil on an acre of ordinary depth; hence there may be fifty million pig-weed seed all through an acre of soil, yet constituting but a twenty-thousandth part, and quite imperceptible even to close observation. No wonder then that whenever the soil is turned up to air and light, these numberless seed start into germination, and the whole surface is soon covered with a close green growth.

Their number is almost beyond estimate. Their increase is incredible. Every farmer who passes by a single weed should know what figures say of the increase it may occasion. Take the lowest number we have given for the product of seed on one plant, or only 1,000; next year, 1863, it may be 1,000,000; in 1864, 1,000,000,000; in 1865, 1,000,000,000,000. This will do for three years—our young arithmetical readers may carry out the calculation for the ten years if they wish.

This, altogether, looks formidable. The best way, however, to conquer an enemy is first to know his strength. Such a thing has been done as clearing a farm of weeds, and it may be done again. Plowing, harrowing, careful cultivation, well conducted rotation, seeding to grass, &c., have performed wonders on the farm at large; and the hoe, spade, and thumb and fingers, have been as successful in the garden. The great error which most have committed, as we have elsewhere remarked, is in not making the war one of complete extermination. A very few stragglers are enough to increase and multiply. If a farmer has a ten acre field of weeds, and if he succeeds in destroying ninety-nine hundredths, he is satisfied; he thinks he has done the thing up brown. But in a year or two he has the same operation to go over again. It would be far more economical, and save also a great injury to an otherwise half smothered crop, to finish the job up completely and totally—search and re-search till the last solitary straggler is demolished. This is especially so with gardens. Let nothing go to seed—hunt for the last one—the soil will soon be worked clean, and labor will be lessened, and crops grealty increased. But the price of freedom [from weeds] is eternal vigilance.

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[For the Country Gentleman and Cultivator.]

THE BORER IN APPLE TREES.

I wrote a piece for THE CULTIVATOR two years ago, in relation to an apple tree which had been much injured by the borer. I will now state in addition to what I then wrote, that the tree is alive and doing well, and has some apples on it the present season. I applied last summer a composition of grease and tar from wagon axeltrees, and I think it answers a good purpose to keep out the water from the tree where the bark had been removed; and by washing the tree two or three times a year with soft soap and lye, the bark is kept smooth and healthy, and free from insects.

I will further add that five years ago I obtained 100 apple trees from the nursery of John R. Comstock of Washington, Dutchess Co., N. Y., for Jeremiah Fuller of Kent, Conn. They are healthy, fine looking trees, and doing as well as any I have seen of the same age. Some of the trees will yield from a peck to half a bushel of apples this year. They have been washed with soap and lye twice a year, which has given them a very healthy appearance. The field has been plowed and manured every season until last spring, when it was seeded with clover after winter sown wheat. I applied a shovel of leached ashes around the trees last spring, which I think is a good thing for young apple trees. JOHN R. BLAIR.

P. S.—I think common grafting wax—(rosin, bees-wax and tallow,) mixed with a little tar, would be a good application where the bark has been removed on account of the borer. J. R. B.

* * *

To Cure Kicking Horses.

In No. 13 I noticed an inquiry about a kicking horse. If the horse stands between two partitions, bore a two-inch hole in each, on a horizontal line, about one and a half inches above the horse's hip; put a round stick in the holes, and put a pin in each end of the stick, so that it will not fall; tie the horse pretty short, so that he will not back too far. He will try to kick, but will not be able. After a few ineffectual efforts he will give it up. After one or two years of such treatment the horse will be cured. The horse cannot hurt himself, for the stick is too near his hips. I have two mares that used to kick. I tried this plan and cured them.—*J. R., in Rural New-Yorker.*

The Government and Products of Nicaragua.

The Hon. A. B. Dickinson, our Minister to Nicaragua, has kindly favored us with the following reply to a letter addressed to him by a gentleman of Wisconsin :

Leon de Nicaragua, July 16, 1862.

John R. Wheeler, Esq., Columbus, Wis. :

Dear Sir—Your letter dated May 21st, 1862, asking a number of questions concerning Nicaragua, is received. I proceed to answer them as follows :

1. There are a few citizens of the United States scattered through Nicaragua, engaged in trade and agricultural pursuits—two or three at Leon.

2. Citizens of the United States can engage here in commerce or agricultural pursuits with as much safety as those of this country. The Republic has been at peace and gradually improving for the last five years, during which all kinds of business have been carried on with as much safety as in any part of the world. Murders and robberies are of rare occurrence. No country in the world is more exempt from them than Nicaragua. Political revolutions have been the bane of the country. But under the wise, just, and firm administration of General Martinez, who is now President, and will probably be re-elected this fall for another term of four years, there is nothing of the kind to fear.

3. Sugar, cotton and coffee, all of excellent quality, are cultivated and exported in limited quantities. Sugar and coffee to Liverpool and San Francisco—cotton to New-York, Liverpool and Havre. No improved implements of husbandry have yet been introduced, but I have ordered some, and shall see that they have a fair trial. Sugar mills, cotton gins and coffee hullers are introduced to a limited extent, but are not in general use.

4. Several species of the American Agave are cultivated for home consumption. A species called "*cabuya*," is grown in almost every garden, and flourishes in great abundance and perfection. Nothing seems to injure or destroy it, but every leaf attains a strong and perfect growth. It can be raised very cheaply, and in any quantity desired. The fibre is similar to that of hemp. It is made into cordage, twine, hammocks, and many other things, but is principally used in the country. The *pita* is a finer species, bearing to it about the same relation that flax does to hemp. No machinery is used in the extraction of the fibre, or in its manufacture, except the rude implements of the country, which were probably in use before America was discovered. With proper machinery its cultivation and manufacture for exportation would undoubtedly be a most excellent business.

5. Tropical fruits, such as oranges, lemons, pine apples, bananas, plantains, &c., grow here fully equal to any in the world, in quantities literally inexhaustible ; but very few are exported.

The Panama railroad company run a semi-monthly line of steamers up and down the Pacific coast, from Panama to Guatemala. Transient vessels occasionally touch at these ports, but cannot be relied on.

6. Labor can be obtained at moderate cost, but I cannot say that it is either industrious or reliable. The natives are not very steady workers.

In short, nature has provided all the means to make this a most excellent locality for agricultural, mining, manufacturing and commercial pursuits, but man has as yet done but little to develop the resources of the country. Active and energetic business men with a little capital can do well here at any of the pursuits above indicated. The transit route, between the two oceans, through Lake Nicaragua is now being re-opened, and will add greatly to the business facilities of the country.

Your 7th, and last inquiry, is whether I had changed my views in regard to a remark which I made in my address at Buffalo, to the effect that I would not advise a farmer to settle in any country where he could not have plenty of good pasture.

I answer that I say so still : First, for the reason that in all countries where grass grows well, the cultivator of the soil has all the material on his own farm to increase its fertility to any extent he chooses ; and secondly, because if he has no pasture, he has no good butter, and if he has no good butter, he has no good beaf-steak, mackerel, shad, stewed potatoes, or oysters, broiled or fricaseed chickens, short or buckwheat cakes.

In short, a farmer that has no pasture has no hay, milk or butter, without which he is no true farmer, as he produces nothing that brings either man or beast to perfection.

Central America has naturally a productive soil, which has been sustained and renovated for hundreds, if not thousands, of years by the outpourings of her numerous volcanoes, yielding in great perfection and luxuriance such products as are congenial to it, including Indian corn, but you can judge of the quantity and quality of its grasses from the fact that the best cattle of Wisconsin, and other western, as well as eastern States, are worth in the New-York market from $50 to $75 per head every week in the year, to ship to the Bermuda market, while the best cattle of all the Central and South American States are worth in their home markets from $4 to $8 per head, and thousands of them within but four or five days' further sail from the Bermuda Islands than the New-York market. Yet the hides of the latter are equal to any in the world, according to their weight, as they are exported to all parts of the civilized world ; while the beef in carcass is worth only one and two cents per pound ; and yet the tallow is worth twelve and fifteen cents per pound. The average price for three and four year old steers, was below $4 per head in United States currency, at the great fair at San Miguel last fall.

As a farmer, I prefer good grass land to all the luxuries of the tropics, including cotton, coffee, indigo, tobacco and rice, without it. A. B. Dickinson.

DIRECTIONS FOR CIDER-MAKING.

The following extract is made for the Country Gentleman, from a report on Apples and their management, submitted last year by a committee of the Hampshire (Mass.) Agricultural Society, of which Mr. David Rice was Chairman :—

Good cider cannot be made from inferior, or decayed, or worm-eaten fruit. The apples should be ripe and mellow before they are ground out in the mill. They should be mixed, sour and sweet, in about equal proportions when carried to the apple heap. After the fruit is ground in the mill the pomace should stand in the vat a day or two, being frequently stirred with a wooden shovel. Being thus brought into contact with the air, the cider will have a fine rich color, and a better flavor, acquired by the digestion of the apple skins, which contain a fragrant oil, and by chemical changes wrought in the cider proper by atmospheric influences. The cider should be stored in well-cleansed barrels or casks, and put into a dry, cool cellar. After fermentation has quite ceased, the barrels or casks should be hermetically closed. No foreign substance should ever be added to cider with the idea that it can be improved or made better thereby. Those who wish to poison their cider by chemicals will bear in mind that when they do so their cider becomes a *medicinal tincture*, unfit for a beverage, or to use in any way unless prescribed by a physician. Cider will keep fit for use much longer if bottled soon after the vinous fermentation has ceased.

[For the Country Gentleman and Cultivator.]

CULTURE OF WHEAT.

Deep and Shallow Plowing for Winter Wheat.

I have heard some farmers argue that winter wheat requires a deep, mellow soil, and to prove their theory, they would adduce instances in which the roots of wheat plants have been followed downward several feet deep. I have my mind on an instance where a well-digger traced the roots of a wheat plant over four feet into the earth. There appeared to have been in former years in that place, a large hole or excavation, which had been filled up with super soil, and had never become very compact; and the wheat struck its roots downwards almost as far as the stems grew upwards.

The theory of plowing deep for winter wheat would be a good one, if we did not have the frosts of winter to contend with. The roots of the wheat plant are not elastic, like India rubber. If they were, winter wheat would not be very much injured by the freezing and thawing of the soil.

Every intelligent farmer knows that when the soil freezes it is expanded; and as the expansion must nearly all be *upwards*, plants are sometimes lifted from one to two inches, i. e., the surface of the super soil is from one to two inches farther above the subsoil, than it is when it is not frozen. Of course, this expansion lifts the plants with it, and if the roots have struck downwards farther than three or four inches, they must be severed between the frozen and not frozen soil. But in case most of the roots have shot out in nearly a horizontal direction, the plants and roots will all rise and settle back bodily, as the soil freezes and thaws, and but very few of the roots will be broken off.

Now, when the soil is plowed deep for winter wheat, the roots must necessarily strike deep downwards in order to obtain sufficient nourishment, unless the entire soil is filled with vegetable matter and manurial substances for nourishing the young plants. But when the large proportion of vegetable matter and manure are near the surface, the roots all spread out nearly in a horizontal direction, forming a kind of mat or tender sod, which all rises in a body when the earth freezes, without severing any of the roots, except those few that have struck downwards beyond the super soil.

It will be discovered in the first experiment that the plowing was shallow and the crop a good one. In the others, the plowing was deep. In the first, all the vegetable matter and the manure were near the surface of the ground, resting on a solid bed of subsoil. In the latter cases, all the vegetable matter—or most of it—was buried five or six inches below the surface. In the first instance, the roots of the wheat plants, as the vegetable matter and manure were at or near the surface of the ground—did not strike deep into the soil, but spread out almost horizontally. Therefore, when the soil expanded by freezing, the plants were not lifted *out of the soil*, but were lifted with it, and settled back again with the soil when it thawed. In the latter instances, the roots struck directly downwards, to the vegetable matter, and then branched off in a horizontal direction; and when the soil came to freeze, the plants were lifted out, and in many instances, the roots were severed a few inches below the surface of the ground, after which it would require but a few times freezing and thawing to lift them entirely out of the ground.

I passed over various parts of the field, where the second experiment was conducted, in February and March, and in most parts of the entire field, even where it was thoroughly under-drained, the rows of wheat, as it was drilled in, were all lifted out by the frost, the roots being five or six inches in length, resembling the roots of red clover; and they looked as if they had all been pulled up carefully by hand, and laid down in order where they grew.

These experiments satisfied me that deep plowing is not the best way to prepare ground for a crop of *winter* wheat, unless the plowing is done with a *subsoil* plow in connection with a super soil plow. The vegetable matter and manure should all be kept within a few inches of the surface of the soil, by plowing shallow; and then, if the compact bed of subsoil can be broken up, and kept beneath the super soil, the soil will be prepared in the best possible manner for a crop of winter wheat.

Winter Wheat Needs Good Manure.

Why will some fields produce a heavy burden of tall straw, and but very little grain? Because there is a deficiency of grain-producing material in the soil. Poor manure will make straw, but it will not produce much wheat. For this reason, those farmers who feed out but little grain, and who make but little manure from stock that consume grain, do not, usually, raise very good crops of winter, or even spring wheat.

I have observed that those farmers who feed out much grain, and take care of their manure, usually raise good crops of wheat. And, here is the great secret of the good success of many farmers in growing winter wheat—they make a large quantity of manure which is rich in wheat-producing substance. Those farmers who feed much oil meal, when they save their manure, and apply it, almost always raise good wheat.

Another very important consideration is, the manure should be well rotted, and should be spread thin over the surface and harrowed in. I think it is better to *harrow* it in than to plow it in, as if plowed in, it is liable to be buried too deep.

According to my experience, wheat requires but little manure, which should be in a more concentrated form than is necessary for Indian corn.

For this reason, guano, hen manure, or the manure of swine, spread very thin, is far better than common barn-yard manure, for producing a good crop of wheat. And this is specially the case, where there is a good supply of vegetable matter in the soil. Where the soil will produce large straw, no barn-yard manure should ever be applied for raising wheat. Poudrette, guano, or some other concentrated manure should be used in such places, and the barn-yard manure should be applied where there is but little vegetable matter in the soil.

Preparing Seed Wheat

Is a part of wheat-growing which is too much neglected, and many times too, by good farmers. Seed wheat should seldom be taken from that where the entire crop has all been thrashed together, unless it is all extra good, because there is usually, even when the crop is a good one, much of the grain that ought not to be used for seed. If farmers would take the same care in saving seed for a crop of winter wheat that they do in saving Indian corn, there would be a great improvement in that crop.

Seed wheat ought to be saved with as much care as Indian corn; and, when it has not been, it may be greatly improved by running it twice through a good fanning mill, and by turning it very rapidly, so as to blow out much of the small grain. Like produces like; and small shrunken kernels of wheat will not produce large plump heads any more than we can expect to obtain a good crop of Indian corn from poor half ripened and shrunken seed.

Early and Late Seeding.

For more than twenty years past I have taken observations particularly on this subject, and I have come to the conclusion that the earlier in autumn winter wheat can be put in, the better the crop will be, because if put in early it will become more firmly rooted, and will, consequently, resist the freezing and thawing during winter and spring much better than it will if it is sowed late, and has but a few weeks to become rooted.

I have never been able to perceive that the wheat midge would injure the early sowed wheat, on the next season, any more than they would that which was put in a month later.

I have often observed that wheat that was put in on the first of October, would ripen as early in the season as that sowed on the first of September. The chief object in sowing winter wheat early in September, is to allow it time to become well rooted, so that it will not be lifted out by freezing and thawing in winter, as much as it would if it was sowed late in the season. S. E. Todd.

[For the Country Gentleman and Cultivator.]

A Sample of Massachusetts Farming.

Messrs. Editors—I recently made a hasty visit to the beautiful country residence of H. G. White, Esq., of South Framingham, Middlesex Co., Mass., and now send you a few notes of the observations made at the time, and information obtained since, concerning Mr. White's mode of agriculture, stock breeding, &c.

Mr. White's Farm

Consists of about 150 acres, is one and one-fourth miles in length, with the buildings near the centre, a public street crossing in front of them and the Concord river a short distance in the rear, while a private road runs through nearly the entire length of the lot. The farm buildings, which are nearly all new, are neatly and conveniently arranged on the private road, in a long row receding from the public street, with a separate apartment for each branch of the business, and are all models of their kind. His stock barn, horse stables, grain house, hogery, henery and carriage establishment, are each worthy of special notice.

From his dwelling-house, itself a picture of comfort, the view in front is terminated at one extremity of his luxuriant meadows, in a lovely little lake, while his cottage for the farm laborers, with his sheep-folds and barn upon a beautiful hill at the other extremity, surrounded by the grazing flocks and sporting colts afford a lovely back ground to the charming scene. So much taste, elegance and beauty, combined with so much practical utility, is rarely seen on one estate, and forms a fitting type of the home of the true American "country gentleman."

The farm produces about sixty tons of hay, forty tons of other fodder, and from 3,000 to 5,000 bushels of roots, mostly mangold wurzel. Seven acres are this year cultivated with root crops, among which Goodrich's seedling potatoes were prominent, the Garnet Chili having the preference. I noticed a mowing machine, the Victory, manufactured at South Hadley Falls, which appeared to give entire satisfaction. It is a new machine, all iron, of simple construction and less liable to clog than most others. Mr. White said it cost but $65, and he considers it the best yet in use in his section; also a hay tedder, manufactured at New Braintree, which cost $70. This Mr. W. says, "is a most admirable implement, doing the work of eight men in a better manner than they could perform it, and is second to none ever invented for farmers' use." This was followed by Stoddard's horse rake, simple, effective, durable, and easily worked, requiring less outlay of strength by the operator to throw it in and out of geer than any similar machine within my knowledge—cost $35. Fairbanks' platform scales, situated near the barn, give the exact weight of every load of hay, which, with that of all the roots, as well as the weight at frequent intervals, of nearly all the live stock, is carefully recorded for future reference.

The garden contained a choice assortment of the smaller fruits, including strawberries, among which I noticed that Hovey's seedling, so long the most popular in the vicinity of Boston, is giving way to the Triomphe de Gand, as the best for family use—raspberries, Brinckle's Orange and Belle de Fontenay are favorites—blackberries, the Dorchester having the preference; gooseberries, and a great variety of currants, of which the White Grape takes the precedence, all trained in the tree form, well filled with fruit exceedingly large and fair, and dwarf pears, of which there were some superb specimens of trees heavily laden with fruit.

Short-Horn Cattle

The leading feature of the establishment is its herd of Short-Horns, and Mr. White gives more of his personal attention probably to this than to any other branch of his business, and appears to take a deeper interest in it. Having the most unlimited confidence in the ability of Short-Horns when rightly bred, to produce the very best of milkers, and believing this quality to be the most important for New England stock, whatever may be best for other sections, he is breeding from the best animals he can obtain, connected with the most celebrated families of their line with especial reference to the milking qualities of the animals produced, making this his principal object, while at the same time he endeavors to introduce as much symmetry as will be consistent with this object. For instance the bull Duke of Worcester, No. 3896, which he has recently disposed of, was from a long line of deep milkers, being sired by Double Duke, 1451½, out of Cara, which Cara has given an average yield of 23 2-3 quarts of milk per day, beer measure, during the month of June, the largest yield in any one day being 26 ⅓ quarts, and has produced from seven days milk 18½ lbs. of butter, and from ten days milk, 26½ lbs., the feed being grass fresh cut and fed in the stall, except on rainy days when not convenient to cut grass, her feed was three quarts of flax seed meal per day mixed with hay.

Among the heifers, Dora Haines, by Marmion, 1843, out of Anna, for which the first prize was awarded at the N. Y. State show in 1854, in the class of cows and heifers from other states, attracted especial attention, being of a beautiful roan color, and the most perfect symmetry; also Laurestina 2d, by John Bull, 3025, which was sold last year in California for $3200, also a handsome roan color, a fine heifer; and Lady Lathrop, by Young Monarch, 3605, out of Lady Sale 5th, from whose milk for one day in March last, two lbs. and two oz. of butter were obtained—a beautiful red color, large and symmetrical. Among the calves worthy of especial notice, I would mention Red Rose 9th and Myra, both by Marmion, 1843, Highland Maid 2d, and Juliette, both by Highflyer, 578, and Dora Haines 2d, by Duke of Carlisle, 3850. These were all beautiful calves, and will undoubtedly make superb milkers.

Mr. White is breeding the present season from Commodore, No. 3777, by imported John O'Gaunt 2d, bred by F. W. Stone, Esq., of Canada West, a noble specimen of a bull, descended from a long line of deep milkers. Thus he is endeavoring to rear on New England soil, a herd of cattle whose pedigree shall be unrivalled, and whose qualities shall be best adapted to New England wants, and he has selected the Short-Horns to breed from because he believes more good qualities are combined in them than in any one other breed.

Cotswold Sheep.

Mr. White has a fine flock of sheep, consisting of about 150, including lambs, all pure bred or high grade Cotswolds. He is at present breeding from animals from the the stock of the Messrs. F. W. Stone and John Snell of Canada West. His main object is to produce mutton, and although the quality of that from Cotswolds is inferior to that from South-Downs, which he has formerly kept, yet the quantity is so much greater that at present prices, he finds the former much more profitable.

His method of keeping sheep in winter is to have them in lots not exceeding 50 each, with shelter and the privilege of running in and out at pleasure, with plenty of pure water and rock salt constantly by them, and feeds with straw in the morning, poor hay at noon, and good hay at night; between the first and second foddering a gill to a half pint each of grain, usually wheat and oats grown together, or equal quantities of corn and oats, according to size and age; and between the second and third foddering two quarts of sliced turnips each. Believing in variety as well as regularity in feeding sheep, he thus varies their food as much as the means at command will allow. After the ewes drop their lambs he substitutes mangolds for turnips, increases the quantity of grain somewhat, and introduces a proportion of wheat shorts, which he finds excellent for increasing the flow of milk.

Mr. White's system of marking and registering sheep, original, I believe, with himself, is very simple and yet the most convenient and effective I have seen. A little piece of copper about the size and form of the new cents, is attached by a split steel ring to the ear of the sheep through a hole made on the under side near the head, with a common shoe punch; a number is stamped on this bit of copper, that of the sheep bearing it, or perhaps two numbers, including that of its dam. In a book prepared for the purpose, a record is made of everything of interest pertaining to the sheep with corresponding numbers, so that at any time, by noticing the number any sheep bears, and turning to the corresponding number in the register, the pedigree, age, history and qualities of the animal may be readily ascertained.

Mr. W. has been very successful in raising sheep, and thinks it singular that sheep husbandry should be so much neglected by our Massachusetts farmers, when there is so much money to be made by it, and when they may be so easily and frequently turned, compared with any high priced cattle.

Mr. W. has two beautiful brood mares, one a roan Morgan, and the other a grey Messenger, both with foal, and some very fine colts from Black Hawk stock, one from Cassius M. Clay stock, and one from the imported horse Balconnie, splendid creatures.

The swine pens were well filled with pure Chester county stock of the Thomas Wood family, with which Mr. W. now proposes to cross the Paschal Morris stock. He thinks from his past experience, that for general use among our farmers, a cross of pure Chester county with smaller sows, say Suffolk, would be a good cross.

The henery contained a large flock of the Bramah fowls, which are represented to be good layers of rich eggs, good nurses, not inclined to ramble, and make good weight at an early age. A flock of the most beautiful pigeons I have ever noticed, added to the variety and liveliness of the scene. Mr. W. pursues Mr. Quincy's system of soiling, which he commenced three years ago with three head of cattle, and now continues with twenty head. The crops used for the purpose are grass, green oats, clover and green corn; all connected with a portion of dry hay every day. His mangolds last until June. He is now constructing a root cellar with a capacity sufficient for 5000 bushels, with a building over it for tools.

Mr. White's hospitality and powers of entertainment are fully equal to his skill in breeding stock and cultivating the soil; and in this department he has a most excellent help-meet in the person of Mrs. W., who made herself as much at home among the crops and flocks and herds, as in the drawing room, and exhibited an acquaintance and familiarity with them all, rarely seen among American farmers' wives or daughters, and all without losing one particle of the true dignity of a real lady.

Fitchburg, Mass., Sept. 1852. W. G. WYMAN.

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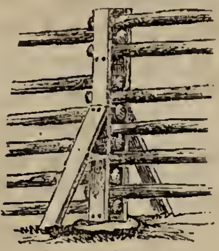
Curious Freak of a Pear Tree.

Mr. Pratt, one of my neighbors, has a small pear tree that bloomed and set fruit at the regular time, and in June blossomed again and set more fruit. At this time both are doing well. The last are set on this present year's growth. A. Moss. *Belvidere, Ill., Aug.*, 1862.

CHEAP FENCE AND GOOD FARM.

In a recent visit to the fine farm of Wm. P. & E. L. Thornton, (who occupy 200 acres formerly owned by Col. Sherwood, near Auburn,) they showed me a cheap and good farm-fence, a description of which may be useful to the readers of the Country Gentleman. It is made of split rails, and a common worm-fence may be converted to one of this sort. It is composed of six rails for each length, and is five feet high. It occupies more space than a post or board fence, but much less than a worm fence. The accompanying cut will show the mode of construction, and represents the place where the two lengths or rails meet.



Cheap Fence.

The uprights, which hold the rails to their place, are simply two sawed strips of wood, about five inches wide, an inch and a half thick, and five feet long, the length being equal to the height of the fence. They are connected by nailing blocks between them, leaving them about five inches apart. One of these blocks is at the bottom, the other within about a foot of the top. On the latter, the three top rails rest. Three large nails are driven at each place into the blocks. The fence is kept upright by a brace on each side, which also serves as an additional security in holding the uprights together. These braces are five feet long, about 18 inches of the lower end entering the earth. Three large nails secure the upper end to the uprights. They may be of sawed stuff, or split like common fence stakes. The lower ends of the uprights rest on a flat stone. It will be observed that no part is subjected to decay, except the braces, the lower ends of which enter the ground. These will need occasional renewing, unless of durable wood. All the rest will last as long as the rails, or thirty or forty years. If the nails, before using, are dipped in hot greese, oil, or gas tar, they will not rust for a long time. The braces should press against the uprights about three feet high.

A water ram, on this farm, has been in successful operation about 15 years; it needs opening about once a month, to restore its action, requiring ten minutes each time. Once in about four years, it needs new leather to the valves. The drive-pipe is iron, three inches in diameter, drives a full stream through a three-quarter inch conveying pipe, and is capable of driving a much larger stream. The water is obtained from an open stream, but no inconvenience ever arises from the sediment which passes through it.

The barns on this farm are capable of stabling a hundred head of cattle, although only about thirty are at present kept. They are all housed through winter and till pastures have well grown late in spring. Much straw is thus worked up into manure, which is applied to the land; in addition to which large quantities have been drawn from the city, costing, when drawn, one dollar per load; a thousand loads have been bought in four years. The surplus straw is sold at four to five dollars per load, but is considered as worth more where it can be converted by cattle to manure. J.

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Rain in California.—According to a rain gage kept at Fort Gaston, Klamath Co., Cal., by Dr. C. A. Kirkpatrick, the fall of rain at that point from September 16, 1861, to June 18, 1862, a period of nine months, reached the enormous amount of 129 inches, and a fraction over! Only think of ten and three-quarters feet of rain in nine months.

[For the Country Gentleman and Cultivator.]

Interesting Letter about our Southwestern Territories.

Sioux City, Iowa, August 6, 1862.

Messrs. Editors—After more than a year's time, in which I have abandoned formal attention to the farm pursuits, for which I endeavored to prepare myself measurably in not only the perusal, but the study of your paper, I still find myself in the service of the Government. As a devotee to the farming interests, however, I do not forget to gather up all the light I can, as to the resources of these Western Territories, as often as my duty calls me upon the plains and river bottoms. Here is, therefore, the result of my observations upon the country in my journey from Fort Leavenworth, Kansas, to Fort Randall, Dakota Territory, both on the banks of the turbid and turbulent Missouri river.

The plains or prairies of Kansas, Messrs. Editors, I can safely say, are not so thoroughly suited to agriculture as one would suppose. Whilst one person is made to say, from an experience and observation of twenty years in Kansas, that the drouth of two seasons since was the only exception to prosperous seasons in that time, there are others who will tell you, with no bias one way or the other, that not a season passes that all of Kansas does not suffer from terrible periods of heat, of arid soil and atmosphere, and of the destruction of or injury to crops. The fall wheat has this season proved a successful crop; but the spring wheat and oats were so thoroughly damaged by the hot weather of May, as to be scarcely any crop at all. In June, however, copious rains in the nick of time saved the corn and brought it along finely. Thus the very drouth which, as it were, destroyed the spring crops, doubtless acted beneficially in the rapid maturing of the fall wheat. In progressing westward, a traveller will observe the greater prevalence of hot, parching winds, until at the big bend of the Arkansas river, a climate is entered upon wholly diverse from that of the Valley of the Mississippi. Now this arid climate, which renders the great plains as it were a desert, does at times extend its influences to part of Eastern Kansas. Its proof is in the season of the famine two years since, which found a serious drouth no where much beyond the eastern limit of Kansas. Wheat I am told, is *not* a profitable crop there, nor is it likely to be. My deliberate opinion is, that Kansas will thrive better as a stock-raising State, and chiefly in sheep husbandry; as a proof of that reflection, I find that form of husbandry is beginning to be the prevailing basis of the intelligent farmers of that State. Messrs. Editors, Kansas is not a well wooded State, and it has not yet produced for the market any supply of coal of which I have knowledge; it may have coal beds, but none are worked.

I give you these observations as the true facts of the case have been presented to me, not to detract from the reputation of these Western States and Territories, and prejudice public opinion against them, but to convey to you what I think to be a fair unbiased criticism of the advantages or disadvantages of settling on Western lands. There can be no comparison between Michigan, Illinois, Indiana, and Missouri, on the one hand, and Kansas, Nebraska, Western Iowa, and Dakota territory on the other. The former, for a farmer desirous of a permanent and thrifty home, are immeasureably more eligible.

What the extreme of winter's cold may be in Nebraska I can hardly say; in Kansas it averages about 10° below zero; in Dakota Territory, as far north as Fort Randall, the mercury I am told has been known to fall to 29° below zero. In Nebraska doubtless it is often as low 20° below zero; and when you add to that temperature the shelterless bleak prairies, whether on the bottoms near the river, or on the bluffs and range of hills which border Missouri Valley, it must be pinching cold indeed. Nebraska Territory, that portion bordering the river valley, I am disposed to believe is more reliable in summer climate than Kansas, and yet the scorching winds which blow on the Arkansas, extend their influences even here. What I learn as a curious fact, is that in the drouthy season of Kansas two years since, Nebraska crops were successful; and this season, whilst Kansas spring crops were so seriously affected, the spring crops in Nebraska succeeded well. Timber in Nebraska is not abundant, being less as a general fact than in Kansas, but more at least on the river bluffs than in Dakota. Of these three States and Territories, I have been more favorably impressed with what I have seen of the Missouri bottoms in Nebraska.

Dakota Territory has during the past year received its territorial organization and government. Its south-eastern limit is the Big Sioux river. The valley of this river is likely to settle up with emigrants from Western Iowa and from Minnesota, and I am assured that emigrants are now preparing to remove to the eastern and south-eastern parts of the territory. I do not think much will ever come of settlement there. Take the valley of Big Sioux river, and the broad alluvial meadows of the Missouri Valley, say for 200 miles from Sioux city to Fort Randall and a distance above it, and you have all that is inviting or eligible in Dakota Territory. The ranges of hills bordering the Missouri river on both sides are bare and bald, almost wholly destitute of tree or bush; and when upon them, and the vision extends interior, the bare hills and swelling prairies are dry and timberless. I am told that in travelling from Bon Homme, on the Missouri, to the British possessions on the north, not a tree can be found except on the narrow border of some stream of water. The view is cheerless and desolate in the extreme.

Most every one is acquainted with the character of the soil composing the bottoms of the Missouri river—where above the annual inundation, it is a fine light friable alluvial soil, unsurpassed for cultivation in this Western world. It needs no drainage, does not clod, but mellows up as nicely as a garden soil of best quality. Its fertility is extraordinary, as is exhibited by the crops I have seen growing upon it, and in the rank growth of weeds or natural products of the land even as far up as Fort Randall. I find that when below Omaha city, the bottoms of the Missouri are densely covered with cottonwood groves, etc.; above that place, as a general rule, the bottoms are more frequently open, prairie-like, and thus more susceptible of immediate cultivation. It will astonish the eastern resident on coming here, to see the ready growth of towns and villages, and their thrifty aspect. Here is a town (Sioux city) on the extreme western border of Iowa, which would do credit to Illinois or Indiana. Omaha city, however, is next to St. Joseph, the most flourishing town I have seen, and when it shall be tapped by one of the branch Pacific railroads, will flourish and increase yet more astonishingly. The embryo towns of Vermillion, Yankton, and Bon Homme, all on the bank of the Missouri river, are yet small, but show what can be done in the narrow space of twelve months. Yankton is the present seat of Territorial Government, and bids fair shortly to be a prosperous settlement.

A reference to the map of Nebraska and that lately published of Dakota, will show here and there large reservations for the Indian tribes—these are generally located upon the finest tracts of land, and retain near the settler's homes a very undesirable population. The Indian tribes in Dakota are still troublesome; depredations and thefts are still the order of the day. A little below Fort Randall are two Indian reservations—on the north that of the Yankton branch of the Sioux tribe, with its agency; on the south near the mouth of the Niobrara or Running water river, the Ponka reserve and agency. At the Yankton agency were numbers of Indian lodges, and I observed large fields of Indian corn under the usual character of *aboriginal* cultivation; that is, more weeds than cornstalks. Fort Randall is protected from settlement (it being still used for military purposes) by its surrounding military reserve. Beyond it there is little or no settlement; all is wild Indian country, over which it is yet unsafe to travel. Journeying from Sioux city to Fort Randall, the trend of the Missouri is nearly due westward. In consequence of this western bearing I found myself at the Yankton agency, twelve miles below the Fort, in the limits of the famous buffalo grass. This year the Yankton Indians have had successful buffalo drives, not to exceed ten or fifteen miles from the agency. On the great route from Leavenworth to Santa Fe, if I remember rightly, buffalo grass is found on the Cow creeks, before reaching the big bend of the Arkansas river. A glance at the map will show Big-bend and Fort Randall to be in about the same meridian; showing the buffalo grass to have a pretty well defined eastern limit, running in or near the same meridian.

I do not know if I have told you any news. I have certainly endeavored to give you impartial opinions of this great region so near to sunset, of which, probably, no one has written you before. But what I have certainly convinced you of is that I have not forgotten the Country Gentleman, nor my wish that I was a substantial Country Gentleman myself. I have seen but few numbers of the Co. Gent. in the last year; most of the time I have been too busy to read it, but I hope the time is not distant when the old quiet and order will be re-instated, and I shall see the cheerful countenance of the Co. Gent. every week. E.

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[For the Country Gentleman and Cultivator.]

IRRIGATION.

I have just returned from one of my meadows, and am so strongly reminded of our old friend Major Dickinson, that I cannot resist the desire of devoting a little time to the Major and some of his special hobbies—for he would not be himself if he had not at least half a dozen in hand at a time. By the way, our South or Central American cousins will never know him and appreciate his many valuable qualities, unless they pitch into some of his favorite theories, or perhaps his facts, for he never believes in theories. They will never see the Major in all his glory till they dispute some of his *farming facts*. If they wake him up on that subject, they will get some idea what thunder means. How often at the annual meetings of our Agricultural Society, when discussions were getting tame and uninteresting, have I doubted some of the facts of the "*gentleman from Steuben.*" How quick everything changed when that gentleman got the floor. Wo to the unlucky man who had thus stirred up the sleeping lion. I think if the Major answers this, he will give me credit for having on pretty much all occasions, been on the opposite side; that he rarely made an important assertion that I did not dispute it; and in the discussion that followed, it was very rare that I did not get important facts. Indeed, I know of no man who had gathered up a greater amount of experimental knowledge upon all subjects connected with agriculture, than our old friend. It is true that now and then a little chaff might blow out with his wheat. But then it has been truly said, or might be, that there is no real great man who does not mix some folly with his wisdom. But the Major's chaff took nothing from the value of his wheat.

The last hobby which the Major seemed to be riding, was irrigation. To hear him talk you would have concluded that his idea of perfect happiness and paradise, was a great mud-puddle, always full, on the top of some celestial hill, covered with blue grass, white clover, red-top and timothy, and he, hoe in hand, opening the little sluices, agitating the puddle, and leading the muddy waters along the face of the hill upon his favorite grasses.

He insisted that there was hardly a farm upon which a few acres might not be profitably irrigated. I insisted that there were few farms, unless in mountainous or hilly regions, where irrigation amounted to any thing. Of course this brought him out, and we had quite a discussion, resulting in my promising to go home and see if I could not find at least an acre that could be more or less benefitted by riding his hobby over it.

There is a little sink into which the surface water from perhaps ten acres is drained. When the field is plowed water is usually carried from this sink down the slope ot a slight hill, on one side of it, in a ditch; but when in meadow, it is left to flow off without much let or hindrance. The field has been in meadow for some years, and portions have *run out* by reason of the worms and frost; and I have at times prepared to plow it, but other work being more urgent, and other portions yielding a fair crop of grass, it has been left, and for the last two years the experiment tried of making it a permanent meadow. A year ago last spring, I bethought me of my friend the Major, and spending about an hour one day with a man and a spade, I turned the water flowing out of the sink round the face of the hill, as high up as I could make it flow, and let it out upon the grass. Last year a decided improvement was manifest wherever the water had flown out upon the grass. Last fall I manured both above and below the little sluice that carried the water, and to-day I have mown the grass upon the ground on each side. I think that upon which the water was conducted will give at least two and a half tons to the acre,—the man that mowed it says three tons,—while the other will not yield half a ton; and both were in precisely the same condition before the experiment was begun, and, except the water, have been treated in the same manner. The experiment cost me perhaps in all 50 cents, and a little personal supervision which all together would not be equal to two hours. I get for it over five tons of hay extra this year, and with a little more trouble I shall cover nearly double the surface, and make an increasing profit. So much for one of our old friend's hobbies.

Darien, N. Y. T. C. P.

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[For the Cultivator and Country Gentleman.]

TENACITY OF LIFE IN THE DUCK.

In the month of January 1859, while residing on Spring-side, we had occasion to weigh some of our Rouen Ducks. This was on Saturday. On the Monday following, one of the number which had been weighed was missing; nothing could be seen or heard of it. As no feathers or other evidence could be found, we concluded she had either strayed away or had been carried off by some *fowl* thief. About three weeks after the weighing took place, and while our men were engaged in getting ice for the summer's supply, their attention was attracted by a strange noise issuing from the waste-weir —a trunk twelve inches square and six feet in length, ending in a stone drain about eighteen inches square. The water in the pond where the ducks were in the habit of visiting in the summer, is from six to seven feet deep, chiefly supplied by springs from the bottom. The waste water flows over the top of the trunk. On approaching and examining more closely, nothing could be seen of the duck, but occasionally the voice and faint quackings could be heard apparently some distance down the drain. There was no way of extricating the unfortunate prisoner from her subterranean abode except by opening the drain. The water of the pond is confined by an embankment sufficiently wide for a road, under which the drain passes. About thirty feet from the border of the pond, we caused an opening to be made in the drain, but as night was drawing near, when finished, we concluded to throw some corn in and about the opening, and leave the exit of the duck until the morrow, when day-light would induce her to come forth; but Madame Duck had been too long imprisoned and on short rations, to remain in her dark and dismal cell another night. Accordingly, as soon as she discovered daylight, she emerged and waddled her way to the poultry-yard, apparently much pleased to join her old associates.

The most singular part of this is, that from the time the duck was last seen in the yard, to the period she was first discovered in the drain, included eighteen days, without food, and apparently not in the least affected by her protracted fast. The question naturally arises, what did she find to sustain life? We know, to be sure, that ducks are fond of worms, grubs, and aquatic insects, &c.; but this dark abode in this cold season, would hardly admit of her finding a supply sufficient to sustain life. C. N. Bement.

Bennington Centre, Vt.

LETTER FROM MR. CORNELL.

AGRICULTURAL IMPRESSIONS IN ENGLAND—THE DIFFERENT CROPS—HURDLE FENCES—SYSTEM OF SHEEP FEEDING, &C., &C.

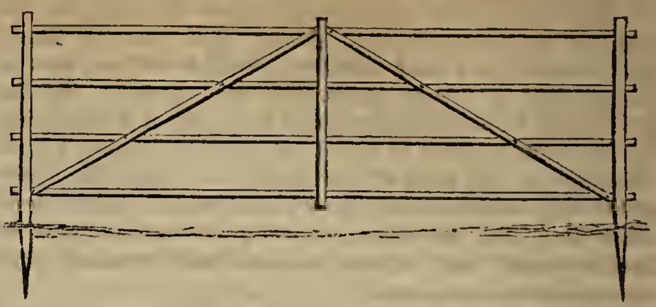
LONDON, August 25, 1862.

FRIEND TUCKER—In response to your wish communicated through our mutual friend Col. J., I turn out this morning at 5 A. M. to write you a short letter, but I fear I shall fail to make it interesting to either yourself or the readers of the COUNTRY GENTLEMAN, as my mind is constantly diverted from the subjects I must write about, by the gloomy aspect that English type gives to American news.

A visit to Rothamsted in July, furnished instructive and interesting matter for a letter, and I intended ere this to have put it in that form, but the moments passed occupied by other objects, and now the memorandums are packed for their homeward voyage, where they must rest for the present.

I see much here that interests me, and it appears to me that we may learn much that will be useful to us as American, farmers. England, in some respects, is better tilled than America; in others not so well. Plowing, the foundation of good agriculture, is done better in New York than here, and the American plow is a better implement, and better adapted to its uses than the English plow. The harrowing, cultivating, pulverizing, crushing, rolling and drilling is done better here than with us, but at an expense of horse flesh and labor that our farmers would regard as ruinous. Harvesting here is an antiquated process, descended from the Romans, the Normans or some other ancient race of people, entirely out of place in the 19th century. With labor at half the price we pay at home, I am confident that it cost three times as much to put a field of wheat in the shock as it does in New York. Securing the hay crop is equally tedious. I have seen hay fields here in which the new grass had grown six inches after the field was mowed, before the hay reached the stack. More pains is taken here than with us to have the wheat pure and varieties unmixed. In hundreds of fields that I have noticed with care, I have failed to find a head of wheat other than the variety sown. This is done by carefully picking over the sheaves that are thrashed for seed, and removing other varieties, if any are found. I have not seen a single spear of rye growing in a field of wheat since I have been here, and rye is grown here in nearly the same proportion I judge that it is in New York. Barley is also cultivated with like care, and the different varieties are kept separate, the two-rowed mostly cultivated. Oats is less cared for, and the varieties are mixed quite as much as with us. The vetch or tare is cultivated much for early green food, and is eaten freely by the horses, cattle and sheep; it is also grown to be fed off by hurdled sheep, with a view of fertilizing the soil, a practice I think that we can adopt with profit. Rape is also grown for a like purpose, and is said to fatten sheep very fast, and the sheep certainly fatten the land very fast. Our climate is not adapted to feeding off a turnip crop in the fall and winter, as it is done here, but I see nothing to hinder the feeding off a crop of vetch or rape in July and August as a foundation for a wheat crop. To carry this in practice we want a convenient and cheap hurdle fence. Here such fence is made generally of split hoop-poles for bars, with the ends framed into saplin posts, and a like post nailed across the center of the bars, with two braces, of split hoop pole nailed on to the bars, the end posts long enough to drive in the ground to support the fence, as shown in the engraving.

This makes a light fence, easily moved, and if properly housed when not in use, will last for years for hurdling sheep.



The practice in feeding is this: Supposing we have a flock of 100 sheep, half of them dry ewes and wethers, that we wish to turn off fat to the butcher, the others to be wintered, and the vetches are large enough to be fed off. We get out the hurdle-fence and fence off say the eighth of an acre, and place the 50 sheep therein that are to be fattened, where they remain a few days, until they have fed off all they seem inclined to take freely, when a new lot is fenced off for them, and the store-sheep take their place; and thus the one follows the other through the field, leaving a naked fallow behind the store-sheep, finely fertilized and in the best condition to be turned over to receive a crop of wheat. In feeding the rape, I am told that it springs up after being fed off, and furnishes successive crops of feed, so that it may be fed off two or three times during the season and then furnish a crop of seed the next season; but with us I presume the frost of winter would kill the roots, so that we should not get the crop of seed. The top of the rape resembles the top of the Swede turnip—the root that of a radish; it will succeed, I think, on any good corn land, and the seed should be drilled in as turnips are, say in rows two feet apart. We may have plants at home that will do equally well to hurdle sheep upon. I refer to this subject for the purpose of directing the attention of our farmers to this mode of fertilizing our farms, while we are supplying our markets with the best of meat.

The turnip and mangold are very extensively cultivated here, and without them England could not feed half her stock, or furnish her people with beef and mutton. Their moist and cold climate is better suited to the root crop than ours, and justifies its more extensive culture; but I think we could profitably increase the culture of the Swede and mangold, and depend on them to a greater extent than we do for feeding our stock. The cooling nature of the mangold is well suited to counteract the heating tendencies of our Indian corn, and the two would go well together in fattening bullocks.

The live fences of England I think less of than I did before I saw them. The hedge generally occupies as much or more land as our crooked rail fence, and is quite as expensive. A stone wall is the best and cheapest farm fence, when the material is at hand to build it. England and America both have more fence than is profitable or desirable in my opinion—the Continent perhaps has less. In travelling from Calais to Paris, thence to and through Switzerland, Germany, Prussia, and Belgium, we saw no fencing of farms, no hedge rows or waste land between crops. Cattle are easier fenced in than out, and the easiest method is pursued.

In England it is being discovered that they have more hedge rows than they can afford, and one estate that I have heard of, has recently reclaimed and added 45 acres to its tillable lands, by uprooting old hedges and consolidating fields. It is high time for a fence reformation at home, but we should not be so radical as to destroy all our fences at once. E. C.

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THE SEASON IN THE ISLAND OF JERSEY.—A letter from our occasional correspondent, Mr. LEVESQUE, in the Island of Jersey, (England,) informs us that the weather there has been very cold and wet. In July it was more like March than summer; some of the land has had to be sown over three or four times. We should be very greatly obliged if Mr. LEVESQUE will give us the system pursued upon the farms of Jersey, the climate, the soil and production. It has been stated that they get three crops a year from their lands, and we know of no man in Jersey better able to inform us, if true, *how* it is accomplished.

[For the Country Gentleman and Cultivator.]

BEST WAY TO DRY APPLES.

MESSRS. EDITORS—According to the reports from all parts of the country, there has seldom or never been a larger crop of fruits, of all descriptions, than that of the present season, and especially is this the fact in regard to the apple crop; and the question is now being asked, what shall be done with our apples? If tho apple crop was a uniform one from year to year, this would not be a question of any great importance, but as is generally the case, a year of abundant crops of apples is generally followed by one or more years in which the crop is a short one, in many sections of country, and sometimes one of great scarcity, as was that of last year, it is very desirable that in years of plenty provision should be made for those of scarcity. By careful picking and storing our winter apples may be preserved to some extent, but for summer and fall apples the only general method is that of drying them; and if they are well dried, and carefully preserved, they can be kept so as to supply the deficiency of short crops when they occur, and prevent the necessity of doing without them at such times, or of paying the high prices at which they are sold.

The most general method adopted in drying apples is, after they are pared, to cut them in slices, and spread them on cloths, tables or boards, and dry them out-doors. In clear and dry weather this is, perhaps, the most expeditious and best way; but in cloudy and stormy weather this way is attended with much inconvenience, and sometimes loss, in consequence of the apples rotting before they dry. To some extent they may be dried in this way in the house, though this is attended with much inconvenience.

The best method that I have ever used to dry apples is to use frames. These combine the most advantages with the least inconvenience of any way, and can be used with equal advantage either in drying in the house or out in the sun. In pleasant weather the framos can be set out-doors against the side of a building, or any other support, and nights, or cloudy and stormy days, they can be brought into the house and set against the side of the room near the stove or fire-place.

My frames are made in the following manner: Two strips of board, 7 feet long, 2 or 2½ inches wide—two strips 3 feet long, 1½ inches wide, the whole three-quarters of an inch thick—nail the short strips across the ends of the long ones, and it makes a frame 7 by 3 feet, which is a convenient size for all purposes. On one side of the long strips nails are driven 3 inches apart, extending from the top to the bottom.

After the apples are pared, they are quartered and cored, and with a needle and twine, or stout thread, strung into lengths long enough to reach twice across the frame; the ends of the twine are then tied together, and the string hung on the nails across the frame. The apples will soon dry so that the strings can be doubled on the nails, and fresh ones put on or the whole of them removed, and others put in their place.

As fast as the apples become sufficiently dry they can be taken from the strings, and the same strings used to dry more on. If large apples are used to dry, they can be cut in smaller pieces.

I suppose that pears and quinces, and perhaps other fruits that can be strung, might be dried in this way, although I have never dried any in this way except apples.

Wilmington, Vt., Sept. 1862. C. T. ALVORD.

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Drying Peaches without Peeling.

A correspondent who has tried tho plan of drying peaches mentioned below, to his great satisfaction, requests us to republish it for the benefit of our readers:

The *furze* is removed by immersing in lye, made by boiling wood ashes in water, to a tolerable strength. The lye should be warm, but not so as to cook the peaches, which are rubbed in it awhile, and then washed in clear cold water. Every particle of furze will bo removed, and only a thin skin remain—they can then be cut and dried in the usual manner. They thus lose nothing of their sweetness by peeling, and are said to be of the best quality for all cooking purposes.

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[For the Country Gentleman and Cultivator.]

EXPERIMENTING IN BEES.

Desiring to try a few experiments in the construction of hives and management of bees, in June, 1860, I engaged two or three swarms of a friend, and prepared hives differing from any I had ever seen. I furnished pretty rough specimens of boxes, as I prepared them myself, with little knowledge of the use of tools. I have since materially improved them, retaining however, in the improved ones, the important principles of double room by the use of both top and side boxes.

I have, with a number of swarms which came out from the 3d to the 25th of July 1860, '61 and '62, five swarms hived in June. I will now give the results of the five June swarms:

No. 1—Hived June 18th, 1860, has given in three subsequent seasons, 1860, '61 and '62, 102 lbs. of box honey—average 34 lbs.

No. 2—Hived Juno 20th, 1860, has given in the three seasons 150 lbs—average per year 50 lbs.

No. 3—Hived June 22d 1861, gave in that season 53½ lbs. In 1862 sent out a swarm July 10th.

No 4—Hived June 26th 1861, has given 90 lbs. of honey—average 45 lbs.

No. 5—Hived June 28th 1861, has given in 1861, 31½ lbs of honey, in 1862 17 lbs., and a swarm July 3d. Amount of honey 444 lbs.

Average for the five swarms each season, 37 lbs.

The honey has all been deposited in glass boxes five inches in depth, and entirely free from brood comb, except the first two which were six inches deep, and had some small portion of brood comb.

The boxes were so arranged when the swarms were hived, that the bees could go directly into them, when they were hived, and commenced work in both boxes and hive at the same time; consequently more than 75 per cent of the honey has been gathered early in the season from white clover, and has commanded the highest price.

I have used both top and side boxes, the whole nearly equal in capacity to 2000 cubic inches. By thus doubling the room for the bees, swarming is rendered improbable. I have but two swarms from the hive in the three seasons. I I think those two would not have swarmed had the boxes been supplied at the commencement of the working season. By closing the boxes, the hive is reduced to common size, and swarms will issue as in other hives.

Here are a few of the facts resulting from the experiments named. More may be given at a subsequent time.

Albany, Sept. 1862. JASPER HAZEN.

Elder HAZEN invites friends to call at his Apiary, at 168 Third Street, Albany, and examine and judge for themselves.

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Observations on the Growth of Trees.

I have in my fruit garden the following fruit and ornamental trees, which I measured in 1860, '61, and '62, (each spring,) before they commenced growing, of which the following figures are a correct abstract:

Names of Varieties.	Hight of measurement.	1860.	1861.	1862.
Rome Beauty apple....	2 feet high.	5¼ inches.	8 inches.	10½ inches
Pound Pippin do. ...	3 do.	8¼ do.	10¾ do.	13 do.
Capron's Pleasant do.,	3 do.	10¼ do.	13¼ do.	15½ do.
Crawford's Keeper do .	1 do.	3⅜ do.	5⅜ do.	7½ do.
Madeline pear, (dwarf.)	1 do.	7 do.	8½ do.	9¾ do.
Magnum Bonum plum.	1 do.	7¾ do.	10 do.	11½ do.
American Balsam Fir,.	1 do.	6⅔ do.	8 do.	10 do.

These are facts that will show to the horticulturist the rapidity of the growth of trees under good cultivation. The pear mentioned above now has on about 400 pears; its age is about eight years from the bud.

Southern Ohio, June, 1862. A. L. WOOD.

[For the Country Gentleman and Cultivator.]

A Suggestion on the Culture of Peaches in Unfavorable Climates.

Eds. Co. Gent.—1. It is well known that the summer climate of Central New-York, and so correspondingly of other States east, and especially west of it, is both warm and long enough for the maturity of the peach.

2. The great evils in its cultivation are:

1st. The pressure of the winter's cold—which, not so much by its intensity, as by its sudden changes, kills the fruit, though not the leaf bud.

2d. The influence of prematurely warm weather, sometimes late in March, but more commonly in April and May, giving an excitement to the circulation which is subsequently checked by cold and often freezing weather, and often by cold dry winds, in consequence of which many buds die, and others are so chemically changed that the early developing bud exhibits the evil known as the curled leaf.

3. Now, as no adequate protection from these harmful influences can be cheaply applied to the tree when standing in the garden or orchard, the covering of the roots with straw after the ground has deeply frozen, being quite inadequate so long as the sun's warm air of spring has free access to the top of the tree, I propose the following plan as more likely to secure a crop of fruit:

1st. Construct stout tubs like half hogsheads, say three and a half feet in diameter and three feet deep; or, in place of them, make square boxes of equal capacity. They might be mounted on small iron wheels, or more cheaply, be furnished with strong iron ears at the top, through which strong poles could be run when about to be removed; or a low strong truck could be used.

2d. Fill such vessels with carefully prepared earth, suitable for the growth of the peach.

3d. In these tubs or boxes plant peach trees in the fall, selecting such varieties as are known to make a dwarfish growth, or dwarfing them on the plum stock. Begin with trees that are about two years old, and that have had their roots shortened at the close of the first year.

4th. Provide a winter shelter, to which these trees thus prepared, may be removed. Advantage may be taken as an experiment, of some out-house already built, or prepare one for the purpose. It may be cheaply built, but should be tight, so as to exclude not only the sun, but the too free access of the warm air of spring. It might be well to whitewash or paint it white externally. Let such a building be from eight to ten feet between the earth and the floor or roof above. It should be provided with a door-way at least ten feet wide. Allowing say seven feet square, for the space of a dwarf tree, after it has been shortened in, then a room fourteen feet square would accommodate four trees, and so proportionately may be calculated the capacity of a larger room.

5th. Into this shelter let the trees be removed about the first of December, and there let them remain until the first of May, or even a little longer, if the buds make much progress under cover. These directions are given for this locality, (Utica,) where the peach usually flowers about the 12th of May. On the subject of winter treatment, experience must guide. Perhaps in a warm open winter it might be needfull to water the trees. A band of hay or straw might be drawn around the outer limbs of the tree, thus diminishing the space needed for its winter shelter.

4. I do not suggest this plan as a cheap one for the production of peaches. Yet I am sure that men of wealth and leisure, who appreciate the difference between a ripe peach plucked freshly from the tree, and one picked immature and carried one hundred miles to market, would readily adopt this plan if they were sure of gathering from a tree so treated, annually one-half bushel of ripe fruit.

5. This plan I have not tested, nor am I in a condition to do so. Yet I am much encouraged in suggesting it by what I witnessed at the German Socialist Colony at Zoar, Tuscarawas Co., Ohio, twenty years ago. There I saw lemon trees fourteen feet high, probably, and orange trees somewhat less, cultivated in this manner. When I saw them standing in large tubs in the open garden, late in August, they were covered with flowers and fruit in every stage of maturity.

The house for their winter quarters was of brick, with large double doors like a barn. In this case, unlike the peaches, they needed artificial heat during the whole winter. I see no reason why this plan, with the modification I have suggested, may not be applied to the peach successfully. C. E. Goodrich.

Utica, August 21, 1862.

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[For the Country Gentleman and Cultivator.]

ANCIENT GARDENING FANCIES.

The stamping of fruit as practiced in Vienna, noticed in Country Gentleman of Aug. 21, p. 131, is no new thing under the sun, but was more ingeniously done by Hellenic gardeners, as we are assured by Theophrastus, in this wise:

The stone of the fruit (peaches, almonds, &c.,) was steeped in water for several days, then carefully divided, the kernel taken out, and with a brazen pen—(a steel one would no doubt do as well—a gold better!) Whatever words or letters were desired, were inscribed upon it. The stone was then closed over the kernel, bound round with papyrus and planted, and the peaches or almonds which afterwards grew on that tree, bore every one of them the legend inscribed upon the kernel!

I tell the tale as it was told to me by a sober classical author, and corroborated by his fellows.

Another fancy was to make citrons, lemons, &c., by the application of a clay mould into which they grew, assume the form of a human face, birds, and other animals.

They were also introduced, when small, into the neck of a bottle provided with breathing holes, the figure of which they assumed as they perfected their growth into all its dimensions.

A great delight of the Greek gardeners was to have monstrous and extraordinary vegetables. They watched the cucumber (always a favorite in the east,) on its first appearance above ground, and then covering it over with fresh earth, repeated the same operation on its reappearance three successive times, by which it is said *the fruit became seedless*. "They were made to grow to a great length by having vessels of water placed daily within a few inches of their points, which exciting by attraction a sort of nisus in the fruit, drew them forward as far as the gardener thought necessary."

Pliny mentions in his Natural History another method, which was to take a large reed, split it, and clean out the pith; then introduce a young cucumber into the hollow, bind the reed, and the fruit perfects itself through the tube to an enormous length.

Lord Bacon, in his Sylva Sylvarum, 462, refers to the experiment of "setting a pot of water a short distance from the cucumber to make it shoot out," and sagely remarks, that if it be true it is an experiment of a high nature, for it discovereth perception in plants to move towards that which should help and comfort them, though it be at a distance! The ancient tradition of the vine, he goes on to say, is far more strange; it is, that if you set a stake or prop at some distance from it, it will grow that way, which is far stranger than the other; for that water may work by a sympathy of attraction, but this of the stake seemeth to be a reasonable discourse! R. G.

Lenox, Mass.

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Growing Rhubarb from Seed.—While in Canada lately, I procured a root of excellent rhubarb, and I have saved some seed from it, but am told by a neighbor that it will not produce the same kind of plant. Will you please inform me if this statement is true? M. B. *North Littleton, N. H.* [The seed will produce rhubarb, of course—possibly, if grown by itself, of the same quality, but more likely of an inferior quality.]

LETTER FROM COL. JOHNSON.

Steam Plows---Mowers---Ag. Show of the Yorkshire Ag. Society.

York, England, August 6, 1862.

L. Tucker & Son—I arrived at York on Monday, the 4th instant, and made acquaintance with some of the officers of the Society at the Show grounds, and was advised of the trial of steam plows and mowers at Stockton, some four miles distant. I went up with Mr. Osborn, who had his combined machine and mower to be entered on Tuesday.

The steam plowing was first in order—only two of the machines being on the ground, Fowler's and Howard's—the manner of their operation having been given, I believe, in the Country Gentleman. Fowler operates four plows and Howard three. So far as the plowing is concerned, it was well done by each, but which possesses the advantage of simplicity and expense, will be decided in the report of J. C. Morton, Esq., who has the matter in charge, and who is in every way competent for the business. Mr. Fowler's plows were operated by an eight-horse power engine—the engine and windlass being stationed on the headland, and opposite to them a self-acting anchor, between which the plow is pulled by means of a wire rope, backwards and forwards, one end being alternately in the air and the other in the soil, thus avoiding the necessity of turning the headlands, which is a very good arrangement. The Messrs. Howard's machine was worked with an ordinary portable engine, with detached windlass, worked by a connecting rod, which seemed to be a good arrangement. It is a three furrow plow, and from its simplicity its motions are very easily controlled by the man having it in charge. The machines, after the preliminary trials, were started for an hour's trial of speed. On the expiration of the time it was found that Fowler's plow had plowed exactly an acre in the hour. Howard's, in the same space of time, with a ten horse engine, had plowed fourteen chains twenty-three links, and 53 links in width. The work was well done, but each of the plows had their advocates. Mr. Morton's report will give the results.

At the close of the plowing there was a trial between Mr. Fowler's machine as a digger or scarifier, and a seven tine cultivator invented by him. They were worked with a 14 horse-power engine of Messrs. Kitson & Hewitson of Leeds, and which is constructed so that it may be adapted to the purpose of thrashing, and to most farming operations. The engine was a powerful one; its arrangement of the wire ropes was preferable, in our opinion, to either of the others.

As to the practicability of introducing these machines into our country, I have great doubts. From the best estimates that I can make, the expense of plowing will be of more than by our ordinary methods. The constant wear the machinery and wire ropes must be very expensive; the difficulty when the engines or ropes give way, as they undoubtedly will, must render it very doubtful, to say the least, as to their being introduced into practical use. The quantity of fuel and water to keep the engines in operation, is very large, and of course very expensive. It must, however be had, and will add largely to the difficulties in the way of its introduction in our country at present. I had hoped to have seen a traction engine with plows or other arrangements to do the work, but there was none present; and from information obtained from a leading implement maker, it appears not to have given satisfactory evidence of its being successful. It is certainly very desirable to secure the application of steam successfully to aid in the cultivation of the farm, and in the onward march of improvement in machinery, I trust we shall yet be favored with the right machinery to accomplish the work—the machine so simple in its arrangements as to be managed by ordinary laborers, thus avoiding the expense of engineers, who now have to be employed. Should Mr. Morton's report be published soon, I will forward it to you.

After the plowing was disposed of, the trial of mowers was had. Reapers could not be tried, as the grain was not ripe, and would not be under two weeks.

There were from 10 to 12 mowers, I think, on the field, but all of them were not tried; they were all, I believe, of American origin, and several were made in America—Wood's, Osborne & Kirby's, Tremain's, the Buckeye, I believe were all made there. The others were made here, some with modifications of the original machine, some with improvements valuable, and others quite doubtful. There were no arrangements to test the draft of the machines, or the amount of land which could be cut in a given time in the ordinary work in the field. The grass was light, though quite thick at the bottom, and required the knives to be properly arranged so as to prevent clogging—a neglect to do this in some cases very much marred the work of some of the new machines, especially one or two from our country. The machines were put in operation, each one managing as he thought best, the judges following the machine around the land two or three times, ascertaining how it did its work, and this, so far as I could judge, was all the means used to ascertain the qualities of the machine for actual farm work. This was surely not such a test as would settle any question as to the value of a machine. It was apparent in the trial, that where a good pair of trained horses, used to the work, with a driver equally well trained, the work was altogether better performed than where a strange span of horses and driver were used. Several of the machines performed their work, I thought, very well indeed, and some of them with very light draft, and others the draft was apparently quite heavy. Wood's small mower, and Burgess & Key's mower, (the Allen mower, I believe, improved by them,) performed the work, I think, most satisfactorily, though some of the others did very well. The judges had not made their report when I left the show grounds this afternoon, and I cannot give the award, but presume that the prize, only one being offered, will be given to Wood's small mower,* to which it was awarded by the Royal Society at Leeds last year. It is a very good machine, and works well in grass adapted to its use.

The show which opened this morning is an excellent one. The cattle (Short-Horns) were, as a whole, first-rate, and far better as a whole than at Battersea—that is, there were fewer inferior animals, and unworthy a place in a show ground, than at the Royal Show. In fact, there was scarcely an animal but what would be esteemed *good*, exhibited, and in some of the classes, especially the cows and heifers, they were extraordinary. Mr. Booth's cow, "Queen of the Vale," the prize cow at Battersea, won the 1st prize here, against five competitors, which were not easy to beat. The 2d prize to Mr. Eastwood of Swinshaw House, Burnley, bred by Mr. Wetherell. The other exhibitors were Lord Feversham, Mr. Douglass, Col. Townley and Lady Pigot. They were all excessively fleshy, altogether too much so for breeders. But fat reigns here in cattle, sheep and swine, to a degree far above anything I have before seen. Yorkshire pigs were in the ascendant, and they are really worthy of their fame. The Leicester sheep appeared first-rate. The horses were as a whole very good—in the hunter and roadster classes far ahead of Battersea. I have not time to write further as to the show, but will endeavor to give you a report as to the residue of the show. A horticultural exhibition adjoining the show grounds was opened to-day, showing that Yorkshire is equally celebrated among the roses as among the Short-Horns.

B. P. J.

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Spring Wheat in Iowa.—A correspondent of the Iowa Homestead says the wheat in Muscatine county is not half a crop. The Club wheat which was formerly so successfully raised there, is this year almost a total failure. The Tea or China variety does much better.

FARM GATES.

A perfect farm should not only be laid out in fields adapted to a regular system of rotation, with a lane or good hard, smooth farm road to render each part easily accessible; but every field should be numbered and be entered through a self-shutting and self-fastening gate. One of the best things, therefore, that a farmer may do early in autumn, is to procure a suitable supply of timber, that he may employ a portion of his spare time on the arrival of winter, in constructing good farm gates.

For a light, cheap, good gate, one of the best we have lately met with is figured in the annexed cut, and we give the dimensions of every part, that the stuff may be procured of the right size and length, and save the loss of cutting away waste portions. It is ten feet and a half long, and the dimensions of the different parts are as follow:

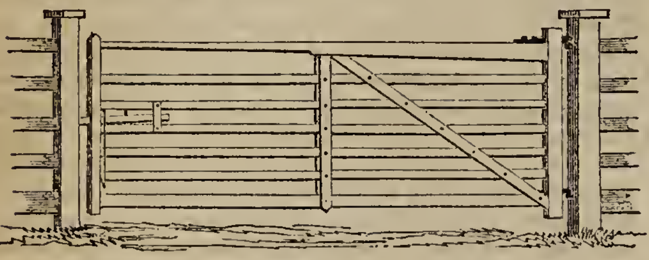
Fig. 1.

Top piece, 10½ feet long, 3 by 4 inches at heel, and 2½ by 2 at latch end, is best made of elm or white oak, but will do of pine.

Six horizontal bars below, all an inch thick—the top one 2½ inches wide—the next four 3 inches wide, and the bottom one 4 inches wide—all of pine.

Heel piece, 4 feet 8 inches long, 4½ by 3 inches; head piece (or at latch end) 4½ feet long, and 2 by 2½ inches—both of oak or other hard, tough wood.

Two perpendicular braces, (one on each side of the horizontal bars, opposite each other, secured by screw-bolts passing through the three,) 3 feet 8 inches long, 3 inches wide, and ¾ inch thick, of white oak.

Two diagonal braces, 6 feet long, 3 inches wide, and one inch thick, of white oak.

The latch plays horizontally or endwise between two vertical cross-pieces, nailed on each side of two horizontal bars, and through a corresponding mortice in the head piece. The latch is 2 feet long, 2 inches wide, and ¾ of an inch thick, of white oak. A vertical wooden spring screwed to the head piece, presses against a wooden pin in the latch, and keeps it shut. It is drawn back for opening the gate by means of another small pin in its upper edge.

The vertical and horizontal braces, being placed on both sides of the horizontal bars, and secured by screw-bolts passing through each, make a very strong gate, at the same time that it is very light. The whole cost, planed and painted, is about $3. In order to prevent the water of rains from penetrating the mortises, both mortise and tenon should be well coated with gas tar before the gate is put together. It would, perhaps, be better, as a cover against the admission of moisture, to extend the top piece over the whole, (as shown in fig. 2,) the end pieces entering the under side of this top piece, and not passing quite through.

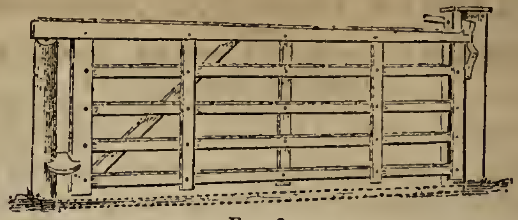
Fig. 2.

Fig. 2 shows the construction of Dr. Robinson's gate, which is simpler and cheaper than the preceding. Its peculiar advantages are: 1. Extension of the top-piece so as to shield the mortises from rain; 2. Simple and cheap hinges, the lower one being merely a concave piece of wood, moving around the post, as shown in fig. 3, and the upper a short iron rod driven into the top of the post (fig. 4) and resting on an iron plug in a hole in the top-piece; 3. A latch attached to the gate *post* instead of the gate, thus rendering simpler and stronger the moving part, and preventing sagging by the entire absence of any weight on the hinges, except when the gate is open. Fig. 5 shows the latch at *b*, and the top-piece of the gate, *a*, and fig. 6 a side view of the same. A pin or spike is driven into the post on which the hinges turn, to prevent hogs and other animals from lifting the gate, and which does not prevent its being placed on hinges while open.

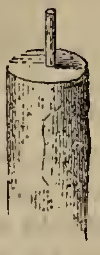
Fig. 4.

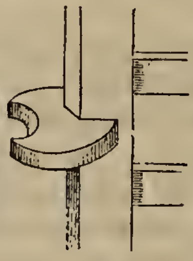
Fig. 3.

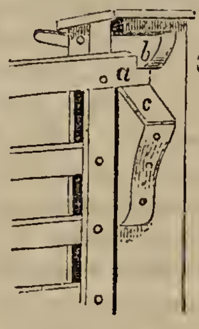

Fig. 5.

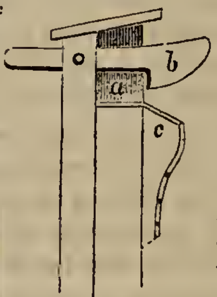

Fig. 6.

The timber for this farm gate is as follows, and may now be got out for winter use: Top-piece, 11 feet long, 3 inches wide horizontally, 5 inches deep at the heel, and 2½ inches at the latch. Cross-bars, brace, and two pieces forming the head piece, 1 by 3 inches. The four horizontal bars or boards are 1 by 5 inches—five would perhaps be better, each 1 by 3 inches. The gate would probably be stronger if the vertical braces were placed opposite each other, and secured by screw-bolts, as in the last described gate.

A neat but more expensive gate is represented in fig. 7. It is made of iron rods passing through a wooden frame. It is well adapted to all self-fastening latches, for being light, its momentum is but little, and it is not therefore easily jarred to pieces. It catches but little wind, and will not cause snow drifts.

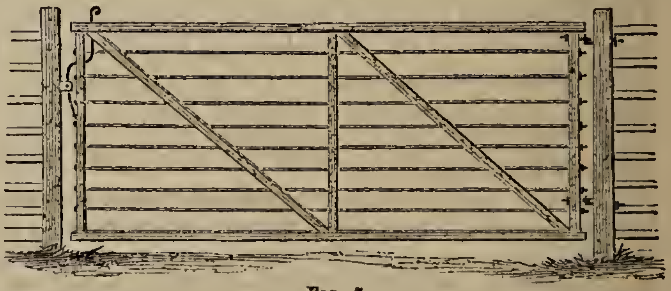
Fig. 7.

If intended as an entrance gate to a dwelling, the dimensions may be as follow: Length 10 feet, height 4 feet; heel-piece (of white oak,) 3 by 3½ inches, and 3 feet 8 inches long; latch-piece same length, and 2 by 3 inches; braces and cross-bar, and top and bottom horizontal bars, all 1¼ by 3¾ inches; rods round, ⅝ of an inch diameter, and secured by heads at one end, and nuts and screws at the other. They are eight in number, and nearer together at the bottom.

MAKING BOARD FENCE.

Board fences, and those of post and rails, are gradually displacing, in large portions of the country, the old crooked or worm fences. As the old rails decay they are removed and used for fire wood, and the remaining ones shortened or closed together, giving place to the new board fences, a portion of which are built yearly by many farmers to supply the deficiency. A common well-made board fence, with durable posts, will last twenty to twenty-five years; but if whitewashed once in three to five years with fresh lime, and when the weather is dry and warm, the boards would probably continue at least thirty-five years. The posts will last more than twice as long in a gravelly soil with a good natural underdrainage, as in a heavy, wet soil with no drainage below. The amount of timber used in an old worm fence is about two and a half or three times as much as in a good strong board fence. That is, 1000 feet of boards and 50 posts will make at least 20 rods; while 300 rails and about 90 stakes are needed for the same length of worm fence. The relative quantity will, of course, vary with the size of the rails on the one hand, and of the posts and amount of boards used on the other—but the above is nearly the average.

Our present remarks do not embrace the building of stone walls, the best of all farm fences where they can be obtained, and hedges, a cheap necessity in other places. As much board fence is made in autumn, perhaps some of the following suggestions, which are not all new, may be useful to many.

Materials for Fences.—A durable *post* is a matter of great importance. The red cedar and locust are the most enduring. The former is becoming very scarce; the latter might become abundant by attending to planting. In fifteen or twenty years one tree will usually make five or six posts, and often more. The next best timber is swamp white oak, white cedar, (arbor vitæ,) common white oak, red or heart beech, chestnut, &c. But whatever be the timber used, it is of great importance that it be quickly seasoned after cutting, to prevent any tendency to become sap-rotten, and it should be dry when set in the ground. Theory, as well as experiment, shows that posts set green decay much the soonest, on account of the long time required for them to season when placed in the earth, inducing partial decay. In all cases where the soil is not well drained, the post must become alternately soaked and dried, as wet and dry periods successively occur, and this rapidly hastens decay. Such soils should therefore always have a good underdrain directly under the fence, which will serve a two-fold purpose—that of draining the adjacent land as any other drain would do, and also of carrying off the falling rain before it can enter and soak the foot of the post. Ramming fine gravel immediately about it would allow the water to pass quickly down into the channel. If tile is used in the ditch, a few inches of stone should be placed over it, and on this the post be set. The cost of cutting such a ditch is but little more than that of digging a row of post holes.

A post so treated cannot become water-soaked, and would have in some degree the same advantage for durability that is possessed by timber always kept dry or under shelter, which is known to last centuries. One other point of treatment will complete its durability, namely, giving it two good coats of gas-tar over the part that is to be half a foot above to half a foot below the surface. The tar should be applied hot, and the wood exposed to the hot sun a few days before the second coat is applied. Oak or white cedar posts would doubtless last at least half a century treated as here recommended by draining and tarring. We have known the durability of pine increased at least ten-fold by the tar coating.

Split posts are always both stronger and more durable than sawed ones. They are not cut across the grain, and the water does not enter them so readily. They may be split and placed to season at once, but if drawn to a mill to be sawed, must often lie some weeks. The only difficulty with the split posts is the labor of facing them, but this is quickly done with a sharp axe, by means of the simple contrivance figured and described on page 42 current volume of the Co. Gent.

The posts should be set at least two and a half feet deep, and the earth beaten with an iron-shod rammer very hard about them, by adding very small portions at once while the hole is filling. Charring posts is nearly useless, the charcoal being porous and admitting water, which hastens decay inside.

Boards.—Pine is best; then hemlock. They should be a full inch thick, and it will be a matter of economy to have every board the same width. It is an almost universal practice to have wide boards at bottom, and of different degrees of narrowness towards the top. There appears to be no advantage whatever in this arrangement, with a good deal of inconvenience in sawing and fitting the different widths, and sometimes of waste in material. Narrow boards are better than wide ones, provided the stuff is not knotty, and the posts are not too remote—four inches wide, and five boards high, (with the small ridge at bottom, yet to be described,) makes a neat fence. Four boards five to six inches will do—in either case the fence will be about four feet above the ridge. The nearer the posts are together, the stronger will be the fence—seven feet is the greatest distance that should ever be adopted—six is better. When other wood than pine or hemlock is employed, such for example as elm, oak or beech, the thickness of the boards should never exceed three-fourths of an inch; if thicker, the nails will not prevent them from warping or splitting as they season in the sun.

The distances asunder for placing the boards may be about as shown in the accompanying cut (fig. 1,) replacing the lower or wide board by the embankment or ridge proposed. For nailing on the boards at proper distances, without the trouble of measuring and marking, provide a gauge as shown in fig. 2, and having nailed the top board first, hang this upon it, when it will support each board in its exact position, as shown by the dotted lines.

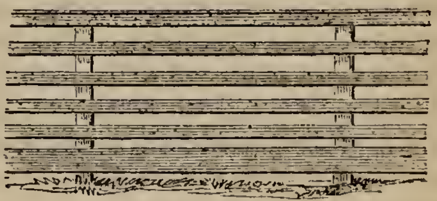

Fig. 1.

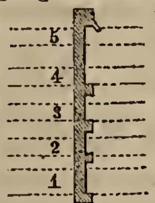

Fig. 2.

A cap-board (fig. 3,) always strengthens the fence, and prevents the upper boards from becoming broken; and where unruly animals are feared, a top board nailed on each side of the post, surmounted by a cap, as shown in section by fig. 4, will render it nearly as strong as a solid timber top. In order to make the ends of the cap fit together perfectly, at the same time to adjust them most easily and quickly, make them lap an inch or two (fig. 5.) partly nail the upper one down, and then

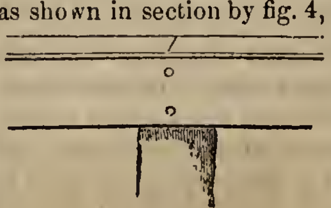

Fig. 3.

saw both off with one cut, a little sloping, as shown by the dotted lines, and they will make a perfect joint. The degree of slope, through one board, should be exactly the thickness of the cut.

It is usual to make the boards *break joints*—that is, for every alternate tier to meet at the ends on different posts. But there are several advantages in causing all the ends to meet on the same post, or keeping each pannel distinct. 1. The intermediate posts need not be so strong, nor have a face more than an inch wide—indeed, a narrow face is best, there being but little chance of its retaining water and causing decay. 2. Only one-half of the posts need have a wider face. 3. It is also easier to nail on the boards, and it may be more quickly done. 4. A vertical facing-board, which is required only when the fence becomes old and the ends begin to give way, is needed only for every alternate post. The cap-board should, however, break joints with these.

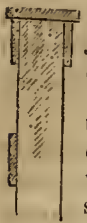
FIG. 4.

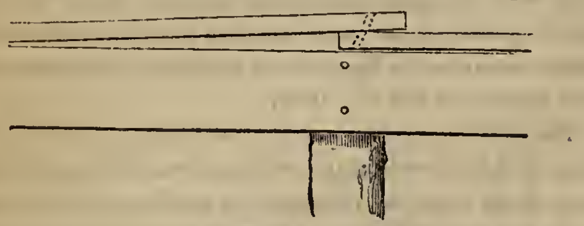
FIG. 5.

There are several advantages in plowing up a small ridge at the bottom to take the place of the bottom board. It lessens the amount of lumber, gives greater depth to the posts, makes an even surface paralled with the bottom board, and throws off the surface water from the posts into the shallow furrows made by the plow on each side. It should be plowed up and smoothed off as soon as the posts are set, and before the boards are nailed. To set the posts perfectly straight, the two extreme ones should be first set, and a line stretched tight between them at top and at bottom. Against these two lines all the intermediate posts are to be placed, and held there till the holes are filled with beaten earth.

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[For the Country Gentleman and Cultivator.]

RENOVATING AN OLD TREE.

EDS. CULTIVATOR AND CO. GENT.—A few years ago a fine large shade tree in our grounds began to decay rapidly. The foliage became thin and yellow, and a cavity in the bole of more than a foot in extent was filled with vegetable mold. This was removed in December, 1859, and the hole carefully filled up with the intestines of a slaughtered animal while they were yet warm.

The experiment was repeated in December, 1860, and in December, 1861, and to-day the old tree, covered with a dense and beautiful foliage, stands at the side of its companion of fifty-five years, healthful and vigorous, as though it might live to the end of its century.

Duchess Co., N. Y. S. D.

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To Cure a Film on the Eye of a Horse.

Take of white vitriol and rock alum one part—pulverize finely, and add clear spring water. With a finely pointed camel's hair pencil or soft feather, insert a single drop of this solution into the diseased eye every night and morning, and in a week the film usually disappears, and the eye becomes bright, sound and healthy. In some cases, pulverized loaf-sugar blown into the eye through a quill will prove a remedy. Powdered glass should never be used in such cases, although recommended by some, as it is much more likely to produce injurious effects, than to cure them.—*N. E. Farmer.*

GARDENS LATE IN SUMMER.

Farmers who raise kitchen vegetables, and who do not keep a regular gardener, are apt to neglect their grounds towards the end of summer and early in autumn, and allow weeds to ripen their seeds. Nothing reduces the current expenses of a family, for the outlay, more than a good kitchen garden; but the complaint with many is the labor of keeping it clean—the constant fight with weeds, weeds. Some have adopted the opinion that a quarter-acre garden will grow more weeds than ten acres of farm land, and there is ground for the belief, as some are managed. A few weeds, allowed to perfect seeds, will produce an abundant crop next year; and thus, year after year, the earth becomes filled with them, till the soil of a garden consists of three main ingredients, namely, a soil, naturally; a large amount of manure, artificially; and an immense supply of foul seeds, spontaneously.

Is it not practicable to clear out entirely and totally, the last of the three? Are weeds a necessity? If a garden contains a hundred thousand of them, and ninety-nine thousand are killed by the hoe, why not the remaining thousand? If nine hundred and ninety of this thousand, why not the remaining ten? ☞ *The soil of a garden may be completelg purified of weeds and their seeds*, greatly reducing the labor of keeping it in order, and largely contributing to a fine growth of the crops. It is easier to keep a garden perfectly clean, than to be engaged in a constant warfare with the weeds. The labor is far less. The reason that it is not done, is the want of care and attention. Nearly all farmers are satisfied if a garden is *nearly* clean. This is the origin of all the trouble,—namely, leaving a few weeds to seed the whole ground. The remedy is, begin now—eradicate every thing—and then, in three days go over again, and eradicate any thing that may have shown its head, and so continue the examination every week, weeds or no weeds. One morning every week should be set apart for this special purpose. Unless something of this kind is adopted, the thing will certainly be neglected. And after they are out, continue the process to *keep* them out. It is easier to spend a half hour in a morning once a week in this way, and have good crops, than to spend three days in each week fighting the intruders, and as a consequence getting bad crops.

A muskrat made a hole in a dam embankment, and the water was washing it larger. The owner applied to one skilled in such things, to close the dangerous orifice. He would charge a dollar, which was more than the owner would give. The next day it had increased, and then the offer was accepted. But the price had increased to two dollars, and was again declined. From this time the breach increased enormously, and the next day the owner had to give the fifty dollars required, or lose his whole dam. It is so in destroying weeds. A little labor at the start would save an immense increase. When a building is in flames, it will not do to suppress merely nine-tenths of the flames, but the last spark must be extinguished. Let every owner of a garden be sure that the last weed is killed, if there is such a one, as often as once a week.

POTATO TOPS, &C.—Every thing in the shape of rubbish, such as early potato tops, cucumber vines, refuse radishes, spring mulching, &c., should be buried on the spot, leaving a clean and neat surface. When an assistant digs a mess of potatoes, cause him to bury the tops at the time. They will decay and enrich the land.

[For the Cultivator and Country Gentleman.]

Cause and Remedy for Sore-Throat Disease in Lambs.

Messrs. Editors—Seeing from time to time in the Country Gentleman, many complaints of, and inquiries for the cause of throat disease in lambs—some attributing the cause to excess of grain given the ewe while carrying the lamb, some to the ram, some to the ewes and some to the peculiarity of the season.

Now I think I can set the matter at rest by giving my experience in this disease, in which it will be seen it is not in either of the foregoing causes, but in the manner of housing the ewes while carrying the lambs.

I first commenced with 25 of the best Leceister ewes I could find. I fed them liberally but not excessively with oats, at the rate of 16 quarts to the 25 ewes through the winter. I lost 33 per cent of the lambs with swelled throats, (a bunch in the throat about the size of a goose egg.) They snuffled at the nose, panted and labored hard to breathe, like a horse laboring with the heaves, and lived from one hour to three days.

My neighbors were of the opinion it was the oats fed to the ewes, and advised me to feed them on hay alone, as they did, with success.

The next winter I fed on hay alone, but my lambs were dropped with swelled throats as before, at about the same per cent. of disease.

I then concluded it to be in the ram, and next year made use of one which had proved himself an excellent getter, but I met with the same sore loss.

I then concluded the fault to be in the ewes, as they were bred some over a hundred miles distant, and so disposed of my whole flock, and purchased some ewes in my immediate vicinity, as well as a ram, all of which had proved their stock to be strong and healthy, but, when the lambs were dropped they too had swelled throats at about the same per centage.

I knew there must be a cause for this disease, and corresponded with many sheep breeders, but could find no one that could throw any light on the subject; all were strangers with the disease, till in a correspondence with Mr. J. C. Taylor of Holmdel, N. J., who is a noted sheep-breeder of (Webb) South-Downs, who called my attention to the manner of housing sheep; remarking, "that when the air of a sheep-stable was confined, though the ewes might appear healthy, yet there was enough poison in the air to cause disease in the lambs, which could not stand so much mismanagement as full grown sheep," and furthermore, "that there was a kind of poisonous air which found its natural home under buildings, cellars, and stables, and while no one has been able to tell why certain impure air causes certain diseases, yet it is a well known fact."

I then concluded the cause was in the sheep-stable; the basement of a barn set in a sidehill—three sides of stone wall, and the other double-boarded—with a door constantly open for going in and out of sheep, together with a window open for ventilation.

Now, I believe the ammonia from the manure, which seldom if ever froze, together with breathing over and over the same impure air, irritated and affected the throat and air-passage of the ewe, which irritation and affection was imparted from the ewe to the lamb, by a law of transmission, during the period of gestation, was the whole cause of the disease. Indeed I have proved it to be so, because last fall I built new and more airy apartments for my sheep, and wintered them in flocks of 25 each; and this spring I had the satisfaction of seeing my one hundred ewes with lambs that had *no swelled throats*.

Last week I examined the sheep-stable of a townsman who a year ago last spring lost several lambs with throat disease, and found the ewes run under the barn—which was under-pinned with stone, say five feet in front and two feet back side, making their home during winter damp and ill ventilated. Last fall the owner divided the yard with a fence, and kept the same ewes in an open shed, and says last spring he had no swelled-throat lambs.

Another gentleman in Barton, Vt., kept 60 breeding-ewes in a common cow-stable, say some seven feet in the clear; he raised only 10 lambs from the 60 ewes, the rest having died with throat disease. He thinks the fault to be in the ewes, and is about disposing of them, little believing the fault to be his own mismanagement.

Two parties in Newark, Vt., keep their ewes in open sheds joining the horse-barn, where the manure from the horse-stable is thrown into it, so that it being warm and inviting for them to lie on, with their nostrils close to the horse manure inhaling the ammonia fresh from the manure,—which is daily replenished for the five months they are permitted to lay on it,—causing an irritation of the throat in the ewe, which is imparted to the lamb. The owners sternly insist it is something peculiar to the season.

We know of a case where two cows were kept in a basement stable; both their calves, in the spring, were dropped with the same disease; one died, and the other lived by magnetising or occasional rubbing with the hand the throat of the calf.

My experience with breeding-ewes, together with suggestions, will be continued. George Bachelder.

Stanstead, Canada East, Aug. 26, 1862.

Agricultural Produce of the United States.

The Census for 1860 gives the following comparative statement of the agricultural products of the United States:

Articles.	1849.	1859.	Increase.
Wheat, bushels,...	100,485,944	171,183,381	70,697,435
Indian corn, bushels......	592,071,104	830,451,707	238,380,603
Cotton, bales,..............	2,445,793	5,196,944	2,751,151
Butter, lbs.,...	248,675,322	460,509,354	211,834,532
Cheese, lbs., ...	105,535,893	105,875,135	339,242
Animals, slaughtered, ...	$111,703,142	$212,871,653	$101,168,511
Sheep, No., ...	21,723,210	23,317,756	1,594,536
Wool, lbs.,.................	52,512,950	60,511,343	7,998,384
Sugar cane, lbs.,..........	237,133,000	302,255,000	65,072,000
Molasses, gallons,.........	12,700,991	16,337,080	3,636,089
Sugar, (Maple,) lbs.,......	34,253,436	38,863,884	4,610,448
Tobacco, lbs.,..............	190,752,655	429,390,771	229,638,116
Wine, gallons, ...	221,249	1,260,008	1,238,759
Hay, tons, ...	13,833,645	19,129,128	5,290,486
Orchard produce,.........	$7,723,186	$19,753,361	$12,030,175

On an average, the increase in the aggregate value of agricultural products, during the ten years, is more than double the ratio of increase in the population. The product of wheat, in 1859, exceeded that of 1849 by over seventy million bushels, which is an increase of seventy per cent. The growth of population for the decade has been about thirty-five per cent., or one-half the increase of the wheat crop. This shows that we are steadily increasing our surplus product of breadstuffs, and putting ourselves in a position for supplying the deficiencies of certain of the grain-growing countries of Europe. A similar increase has occurred in the product of butter, the yield of which has enlarged to the extent of 211,834,532 pounds.

[For the Country Gentleman and Cultivator.]

Sows Overrunning their Time---The Instinct of Pigs.

I have often noticed this matter of instinct in pigs, page 76 current volume, mentioned by Mr. Gregory. The study of natural instinct in young animals is very interesting at all times.

I relation to sows overruning their time, would say that I have kept a strict account with a large number of sows in years past, but have never noticed them to vary more than from one to three days in dropping their pigs.

I know that many old moon farmers talk that if a sow varies more than 24 hours from her regular time, she would not do well, but I have lived long enough to see this idea perfectly skedadled. From the time that Mr. Gregory's sow overrun her time, being about the usual time that occurs between regular seasons in sows, I would ask him if his did not take at the next heat?

A. MOSS.

For the Country Gentleman and Cultivator.]

Hints on the Manufacture of Cider.

Whatever promotes the cause of domestic economy must be useful to those whose aim it is to nurse and make the most of a limited income. Therefore, "whatever is saved is earned"

There is not a more wholesome beverage, we will venture to say, nor one better adapted for general use than the juice of the apple, a fruit with which a kind Providence has bountifully supplied our country. But like every other artificial preparation, the qualities of cider depend on the selection and management of the materials from which it is made. It is conceded on all hands, that the operation is in general most carelessly and slovenly performed by the farmer, and that it is very difficult to procure this liquor of good quality. That there is a vast difference in the quality of the cider brought to market, is evident from the prices in ordinary seasons of abundance—it is from one to ten dollars the barrel. Now, the farmer who sells it at one to two dollars, makes himself poor; but he who obtains from three to ten dollars need never complain of superabundance of apples.

The expense of cider to the farmer is one consideration; the cost of fruit must be taken into account, because it must depend upon circumstances which will variously affect it. We presume that an orchard exists; and in that case, the cost will be little more than that of the labor bestowed in gathering it. The preparation of the fruit is readily submitted to calculation, provided there is a cider-mill at hand.

There are two points in making cider on which the quality very much depends—they are clearness of the juice and the fermentation. The former is easily obtained by the grater cider mills and careful straining; concerning the latter much is yet to be learned. The introduction of portable cider mills will tend both to improve the quality of cider and render the making of it less expensive. Apples when grated make much clearer cider than when mashed; consequently having less sediment, the liquor is more easily managed, and not so liable to be injured by foreign substances. It also sells more readily and commands a better price.

To make *good* cider it is necessary that the fruit should be ripe—that it should be sound—that it should be all of one kind, and that there should be a perfect grinding of the apples. If the apples are not ripe, the saccharine matter necessary to make good fermented liquor is not developed; rotten apples impart an unpleasant flavor to the lipuor, and different kinds of apples afford a liquor that will not ferment equally or perfectly. On the proper mixture of fruits, or rather of their proper separation, the merit of cider will always depend. The first prudential step consists in deferring the work till a late period of the year; November is quite early enough; and those apples are to be preferred which hang on the trees till ripe enough to fall without being much shaken, are capable of making fine cider. It is obvious that the most certain indication of the ripeness of apples is the fragrance of their smell and their spontaneously dropping from the trees. When they are in this state of maturity in a *dry* day, after the dew is off, the limbs may be slightly shaken and partially disburdened of their golden store; thus taking such apples only as are ripe and sound, and leaving the unripe longer on the trees, that they may also acquire a due degree of maturity. Care should however be taken that they are perfectly ripe, before they are taken from the tree, and kept until they are perfectly mellow; otherwise the cider will be of a rough, harsh taste, in spite of all the endeavors of the operator. It may not be amiss to make three gatherings of the crops, keeping each by itself. For this purpose, in the common practice of the country they are placed in heaps, and exposed to the sun, the air, and the rain, not even being covered, except in very severe frosts. This is decidedly wrong. The strength and flavor of the future liquor are increased by keeping them under cover some time before they are ground; but unless a situation can be afforded, in which they are exposed to a current of air, and where they can be spread very thin, they are apt to contract an unpleasant smell which will much affect the cider produced from them. Before grinding they should be carefully examined, and all rotten and decaying apples should be selected and thrown to the pigs. The expense of this will be very small, and amply repaid by the excellence of the liquor and the ease with which too great a degree of fermentation may be prevented.

We now come to the most difficult part of the process in the manufacture of cider—fermentation.

The fermentation of the juice is a process of the utmost importance and nicety, and upon it depends the excellence or worthlesness of the cider. When the liquor is pressed and strained from the pomace, it should be put into clean sweet casks; no time should be lost, for if the atmospheric temperature be at or about 50°, fermention will commence almost immediately, and on the management of this mysterious process, the quality of the product depends. It should now be placed in a cool room or cool dry cellar, of even temperature, and be allowed to ferment, that all the feculent matter may escape from the bung, to insure which more perfectly, the cask may be turned on one side that the impurities may flow out more freely. Where making good cider is an object with the farmer, it is usually racked off after the fermentation has subsided, and time allowed for all sediment to settle.

It has long been our opinion that too much carbonic acid gas is suffered to escape during fermentation, producing either too much alcohol or acetous acid. We perceive some of the best cider makers recommend the prevention of the escape of too much carbonic acid gas, by laying light substances, such as cloths or leaves on the bung hole, while the cider is under fermentation. Now, if cider protected from the atmosphere, except by a small bung hole, is very liable to become too much acidified, would it not be advisable to exclude the atmosphere entirely during fermentation? To do this let the bung be driven in tight, and one end of a small bended tube closely fitted in a hole near the bung, and the other end of the bent tube inserted in a vessel of water. During the fermentation the carbonic acid gas will be driven through the tube, and rise in bubbles from the water, but no atmospheric air can enter. The fermentation can undoubtedly be stopped by racking off, and if necessary by short exposure in an open vessel to the atmosphere.

During the fermentation of cider, though it be called vinous, a good deal of acetic acid is, we believe, always generated, making those liquors more or less harsh, that is really acetic. To obviate this, put the juice into clean casks that have been fumigated with sulphur, and allow it to ferment from one to three weeks, according as the weather is cool or warm. When it has attained to lively fermentation, add to each gallon half a pound of white sugar, and let the whole ferment again until it possesses nearly the brisk, pleasant taste which is desirable should be permanent. Pour out a quart of the cider and mix with one fourth of an ounce of sulphite (not sulphate) of lime, for every gallon the cask contains. Stir until it is entirely mixed, and pour the mixture into the liquid. Agitate the contents of the cask thoroughly for a few minutes; then let it rest that the impurities may settle. This not only mitigates but arrests the fermentation at once, carrying with it all the impurities and leaving the cider excessively clear and bright. It may be bottled in the course of a few weeks, or it may be allowed to remain in the cask and used on draught. It is asserted by some that the *sulphite* not only destroys the life, but imparts an unpleasant flavor to the cider; this, however, has not been our experience.

We propose the partial adoption of boiling the juice, and as this article is written for the farmer, who it is presumed will commence his experiments upon a small scale, there will be little difficulty to bring the suggestion to proof. They who operate in the large way can easily modify the plan by erecting suitable apparatus. We presume that 32 gallons of cider are to be made—the quantity of apples required will be about 12 bushels, which ought to yield 36 gallons; less will not cover the waste that is inevitably incurred. It will now require some saccharine to raise its gravity. Without dwelling on minutia, which we have not had opportunity to confirm by positive experiment, we conclude that one gallon of honey, (West India,) boiled in a tin vessel with 16 gallons of the apple juice, will furnish the requisite quantity of saccharine matter. The boiling can be performed at one or more operations, to suit the convenience of the operator; and it should be continued moderately so long as any material quantity of scum arise, which should be removed as soon as it rises; and one-fourth of the fluid be carried off in steam. When cool, this should be added to the unboiled juice, with which it must be thoroughly mixed. The juice is now brought into a fit condition to be fermented; but here another perplexity presents itself; because cider-makers are at variance as to the first step to be taken—some requiring that the juice be exposed in an open, deep cask, while others pour it at once into casks, and even drive down the bungs tight. All, however, agree that a cool room, or a cool, dry cellar, and very low temperature—45° or less—are circumstances of the first importance. When perfectly settled it should be racked into another vessel, and if not clear, take the whites of six eggs with a handful of fine beach sand washed clean; stir them well together; then boil one quart of molasses down to a candy, and cool it by pouring in cider, and put this together with the eggs and sand into a barrel of cider, and mix the whole together. When it is thus managed, it becomes in the course of five or six weeks, perfectly fine and bright, of a light amber color, and after racking or bottling, will keep sweet many years if kept in a cool place. It may be bottled after racking, and will become sparkling cider.

We have succeeded in fining cider by mixing one quart of new milk with one gallon of the cider, and returning the mixture, and agitating the whole thoroughly when it spreads over the surface and carries all the impurities to the bottom, and leaving the cider excessively bright.

A piece of bloody fresh meat put into a cask of cider will also refine the cider, and serve for it to feed on.

Bennington Centre, Sept., 1862. C. N. BEMENT.

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[For the Country Gentleman and Cultivator.]

SEED WHEAT.

It is the season for the wheat grower to make up his mind what kind of seed he shall sow, and where he shall obtain it. Whatever the kind, let him not fail first, to ascertain the character of its ancestry. Let him not only be sure that the grain is well perfected, and of the highest quality, but also that it has a respectable pedigree. It is a well established fact, that vegetables as well as animals, obtain a habit of growth which is often continued through many generations. This fact is appreciated and acted upon by our best farmers. They either select for seed from crop to crop, the best grain raised by themselves, or they purchase of those farmers who are most noted for growing the best crops. Other considerations, also, enter into the choice of seed. The climate where it is grown, the soil which produces it, the time of ripening, the liability to injury from insects, and others which the thoughtful farmer will not fail to think of.

Let us urge the farmer to make sure of the best seed he can procure. If the cost should seem an objection, he may save the additional expense by economizing in the quantity sown. This can be done by giving it as near as possible, the best covering to produce quick and healthy germination. Too little care has been used to give the seed a uniform depth of covering. It is a charming sight which a smooth wheat-field affords, when the first blades show themselves of a uniform size, and distributed evenly all over the surface. It does good to every passer-by to look at such a field. How much more must it delight the owner and his family. It is a thing of beauty, which, we are told, is a joy forever. What farmer will grudge the time and care needed to do his part towards giving beauty to eye and heart, at the same time that he provides the surest means to obtain a bounty for his pocket.

J. W. S.

SMALL-POX IN SHEEP IN ENGLAND.

An event has just occurred which has been the cause of considerable alarm and anxiety to the agricultural body generally. A short time ago a flock of sheep belonging to Mr. J. Parry of Allington, Wiltshire, was attacked by a disease which at first was not particularly noticed, but it soon assumed a very malignant form. The remedies that were applied proved futile against the disorder, and at length Professor Simonds was consulted, who, after hearing the peculiar characteristics displayed, at once pronounced it to be small-pox. On the Professor proceeding to the spot his opinion was confirmed. And the question then arose how it could have been introduced into the flock, for there is no instance on record of the disease having been self-generated. No possible clue could be discovered by which its appearance could be accounted for. It, therefore, occasions no small degree of alarm, as everything is in the dark with respect to this unlooked for and most mysterious appearance.

The disease had been previously known in this country, but only on one occasion, and it could then be traced to a foreign introduction; but on the Continent unfortunately it is too well known, and its visits are dreaded accordingly from the havoc they make among flocks. Its former appearance in this country took place in 1847, from the introduction of some Spanish Merino sheep infected with it, which were brought into Smithfield market. Those sheep were sold, and wherever they went they carried the disease with them. It was then that it was brought into Norfolk, Suffolk, Cambridgeshire, and the Eastern Counties generally; but to whatever quarter the disease thus spread, as it did in the subsequent year, it could be traced to some contact, however remote, with the infected source. But precautions were then taken, chiefly by isolation, to prevent the spreading of the disease; these proved successful, and it gradually died away.

Professor Simonds, the Veterinary Surgeon to the Royal Agricultural Society, on proceeding to inspect Mr. Parry's flock, found the animals in various stages of the disorder; some few had passed through the worst period, and might be pronounced convalescent, but of those attacked many died daily under the most disgusting circumstances, their bodies presenting a mass of malignant ulcers, and emitting a fearful stench. Mr. Simonds at once suggested inoculation of the remaining portion of the flock as the only means of preventing its almost total annihilation, and it now remains to be seen what will be the result of the remedy suggested; and of course the flock itself, although from its locality isolated from other flocks in the neighborhood, has been kept still more within itself, so as to stop every possibility of spreading the contagion, and so far at present the efforts have been successful.

A review of all these circumstances renders this a truly appalling visitation. On the former occasion, as we have observed, wherever the disorder spread, it could be invariably traced to the one source; but on this occasion there is no clue whatever. A flock of sheep, one of the largest in the district, noted for its continuous healthy appearance, which has had no contact with other flocks, and into which for nearly two years no new introduction has taken place, is all of a sudden attacked with a disorder assuming at once its most virulent and malignant form. This is indeed a matter for serious consideration and grave misgivings. If such a terrible disease can be self-generated, no one, whatever his locality may be, can hope to be out of the pale of its visitation, for Mr. Parry's sheep were in a situation proverbially healthy, and where previously, exemption from disorder was the rule. It is to be hoped that some light may be eventually thrown upon the subject, for all at present is darkness and dismay.

There is, however, this sort of consolation, that this disease, although highly contagious among sheep, cannot be communicated to other animals. Professor Simonds states that inoculation with the virus has been repeatedly tried, but that, singularly enough, it has never taken even in the case of goats, which may be considered of a kindred species. It is not communicable either to the human race.

[For the Country Gentleman and Cultivator.]

Letter from Hon. Henry F. French.

Boston, August 30, 1862.

Luther H. Tucker, Esq.—Accept my thanks for three volumes of the Transactions of the New York State Agricultural Society just received through your kindness. Without referring to these Transactions, of which I have now a complete set, I hardly feel safe to write upon any agricultural subject, for I often find that my doubtful questions have already there solved, or my ideas, which I had fully supposed somewhat original, had been fully expressed by some committees of your Society.

Withdrawn somewhat, though I trust but temporarily, from the daily practical pursuits of agriculture, my heart is still in the green fields, and I am more and more impressed with the truth of the sentiment attributed to Jefferson, that "they who labor on the soil, are the chosen people of God."

Even this awful and wicked rebellion serves anew to illustrate the importance of the agricultural interest to our country.

Although I cannot yet believe that the *people* of England, her farmers and laborers, her philanthropists, or her middle classes, even among tradesmen and manufacturers, are unfriendly to us, yet it is too manifest for doubt, that the aristocracy, which is the controlling power in the British Government, have allowed a petty spirit of jealousy of institutions from which the aristocratic element is excluded, to rejoice in our humiliation. This was the first impulse of aristocratic Europe generally; to exclaim to the advocates of free and popular institutions, "behold the failure of your great experiment of Republicanism; who shall henceforth say that the people are fit to govern themselves?" Count Gasparin in his recent work, "America before Europe," which is worthy the study of every American, and every European too, maintains that England is already ashamed of her hasty sympathy with a rebellion based on slavery, and is fast returning to a position more worthy of a free and law abiding nation.

However this may be, one thing is clear, that our best security against foreign intervention and the recognition of rebeldom as a nation, has been, not in our army nor our navy; nor in our power to injure, but in our ability *to feed the hungry of the old world!* Mr. Caird, who is perhaps, the highest authority, says that England in common seasons, consumes 300,000 bushels of grain a day through all the year, more than she produces. Last year her crops were far below the average, as were also those of France, while those of America were abundant, not only to feed ourselves at home and our vast armies in the field, but to meet the demands of the old world. England groaned for want of cotton to employ her spinners and weavers, who in the best of times labor hard for a bare subsistence. They could live without cotton, but without corn must come starvation. It was plain to see that intervention would bring war, and that war would at once stop all supplies of food, and so our power to do them good, in arts of peace, was mightier than all the arts of war.

The farmer then, who amid the din of arms, quietly tills his field at home, as truly serves his country, if he gives his heart and his influence to the right, as they who make the severer sacrifice of service in the tented field. There is a place and a duty for those whose youth and strength fit them for deeds of arms, but let no man whose duty requires him to remain at home, think ignobly of his humble labors on the farm.

There are men whose duty to the country even now, requires them to remain at home. Such are our public teachers, in our colleges and schools, the few whose gifts are peculiar, and whose places could not be supplied. Such, with deference to your own judgment, are the editors of the Country Gentleman, whose weekly reports of the progress of agriculture, are as important to the country as the dispatches of our military chiefs. How goes the battle, and how come in the supplies, are equally important questions.

Your last paper gives encouraging statements of the progress of agriculture in your great state. As labor becomes dearer, through the absence of the million soldiers from the North and West, we must maintain our production by larger crops on less land, and by the use of animal power, and improved implements.

My old friend Levi Bartlett is a faithful watchman for you in New Hampshire, and gives reliable reports of the condition of agriculture in New England. We are, I think, constantly mingling more brains with our work, and so are aiding nature rather than forcing her.

Farm Implements.

In recent travels through New England, I have been struck with the rapid introduction of farm implements, especially in the hay harvest. On almost every respectable farm, I notice the mowing machine in operation, or observe its track where the hay is cleared off. We used to hear stout mowers boast that they could cut two acres a day, but this implied a start at four o'clock in the morning, and a severe strain on the system all day. Now the strong man may be in the army, while another, too old or feeble to bear arms, with a pair of horses and mower, can easily cut four times as much as the strong man claimed to be able to do, and about eight times as much as a prudent man should cut. The horse rake and the hay caps reduce still further the severe labor of haying, and the improved rigging for hauling and arrangement of barns for unloading, have in many places made this severest of all farm labor, rather a holiday amusement.

Root Culture.

In root culture and market gardening, the progress is almost as great. Farmers who formerly associated the idea of a lame back with an onion bed for the family, now lay out their acre of mangolds or turnips, with the thought that the old horse, with some one or more of the various cultivators and weeders, will do most of the work on the crop.

By precept and example, I have, since my visit to England in 1857, done what I could to promote the culture of the mangold. There is, certainly, no root so valuable for milk, and none so easily raised or kept, and I observe that on my Exeter farm, where my land was thorough drained with tiles, and is now in grass, that which had been cropped with mangolds has always been followed by heavy crops of hay, the fine culture requisite for the mangold bringing the land into the best condition for grass.

There has been an impression that grass does not well follow the turnip crop in this country. It is a question of much importance, and one upon which I should not like to give a decided opinion. In my own experience, I have had no failure of grass after turnips, although I have laid down fields in July with turnips and grass seed, and have also cropped the land heavily with swedes, and followed them with oats and grass. Still, as my practice has been to manure liberally for all root crops, and cultivate very thoroughly, perhaps heavy crops of grass would follow even a crop of roots not of itself favorable generally to grass.

Drainage.

My somewhat various experiments in tile drainage have now been under observation long enough to enable me to pronounce them completely successful. On my Exeter farm, most of which I still own, my operations were upon two kinds of upland, one a springy side-hill, so wet that cranberries grew naturally upon it, with a sandy soil resting on clay—the other a solid clay, so hard that a pick was used to move all the soil in the ditches below about one foot. In general, my tiles were laid four feet deep, and from 30 to 50 feet apart. The side-hill, from being too wet for any crop, became at once the earliest land in the town, and fit for a garden. I could work it at any time after the frost came out in spring till it was frozen in autumn, and it yielded the heaviest crops of roots, of oats, and of grass, that I have seen in that region. The clay land, from being unfit to plow by reason of wetness in the spring, became at once fit for any crop. I cropped it two years with roots, followed the next year with oats, which failed, as did most of the oats in the neighborhood last year. This season it produced a very heavy first crop of hay and a second is now about to be cut. Perhaps a less depth may answer the purpose, but tiles four feet deep in solid clay, after a year or two for cracking the ground, will perfectly and speedily drain the soil.

Irrigation

Is a subject upon which I hope to see more written and more done in future. Many suppose that drainage and irrigation are for different lands, whereas they are parts of the same system. Irrigation I take to be chiefly valuable in this country east of the rocky mountains for grass crops, and I think on almost any field two or three crops of grass may be produced by irrigation with almost any running water. There may be, as Major DICKINSON says, lime water that will not benefit grass, and it may be that muddy water is better than clean water, but so far as I learn by observation or reading, irrigation with clean water is usually beneficial. In California they have a practice of irrigating with water pumped from wells by horse or steam power. In such cases the water should, I think, be warmed by exposure before it runs upon the land.

The application of much water, however, to any but a very porous soil would prove at once destructive to all valuable vegetation, and unless nature has provided drainage, either by the slope of the field or openness of the soil, so that the water will at once pass off, underdrainage must be essential. Great benefit may be conferred upon the interests of agriculture by reports of well conducted experiments in irrigation.

Trusting that my long talk upon subjects so interesting to the farmer may not be quite without profit to your readers, I remain your friend. HENRY F. FRENCH.

[For the Country Gentleman and Cultivator.]

PROFITS IN KEEPING POULTRY, &c.

The profits in keeping poultry depend wholly upon the way in which the business is managed. It can be made profitable or unprofitable.

Poultry fanciers have been known to make considerable sums by shrewd management; and how often have boys, and old ladies even, gone into the business of keeping hens, commencing operations early in the spring and winding up at thanksgiving-time, with complete success. The way it was done was simple enough, and almost anybody possessed of patience and good nature—the latter principle quite essential—could do as well if he or she, as the case may be, would make the trial and persevere.

It is not necessary to have a fine poultry house, or any house at all; on the contrary, the most common shed will often times serve all the purposes for a shelter.

But when I took up my pen to write, it was to say something of my own experience in the hen business, rather than to discuss the somewhat philosophical question of "profits," a subject, by the by, which has of late occupied some portion of the COUNTRY GENTLEMAN, greatly to the edification of its numerous readers, and especially those of them particularly interested in the science of "henology."

Early in the spring I was afflicted with the hen fever. How it was brought on I cannot say, unless it was by "exposure" during an examination of a hen-house attached to my outbuildings—a very nice sort of an edifice, erected several years ago by a gentleman of both taste and means, and well suited to the business for which it was originally designed. However that may be, I clearly remember this fact, that while I was making the examination referred to my mind was considerably agitated, (from what cause I could not tell,) and I resolved upon the spot to put the hennery to its legitimate use, and the very next day I bargained with a "select" dealer, and paid down $10.50 for one cock and six hens, catalogued "Brahma fowls." Very large and very nice looking fowls they were. They proved to be moderate eaters, that is to say the quantity of food devoured by them was quite small, and their *litter* was less than birds of the common sorts of smaller feather.

At the go-off two of the hens kicked the bucket, and were tossed unceremoneously into the piggery, where I have reason to know they were interred after the manner usually practiced by the whole swinish race. But I soon had reason to rejoice over my investment, notwithstanding this seemingly unfortunate beginning. The other four hens commenced to lay, and in the course of a week or so, "averaged" an egg a day apiece. I had the eggs carefully put aside, and as circumstances favored, the process of incubation was intrusted to hens of the common sort. Three of this class hatched from thirty-three eggs just thirty chickens, all within the same week. I now confined both hens and chickens in a room 15 by 20, in my horse stable, feeding them regularly twice each day, upon cracked corn. They were supplied with fresh water as often as was necessary; and in this manner they were kept till the fourth week, when they were suffered to run out during the day in fair weather. The chickens are now nearly three months old, and of the thirty, twenty-seven lived. The other three died, one by paralysis, two by accident. The living are elegant specimens of their kind, and some of them will weigh four pounds and more. The cost of feeding this flock at the present time is just one quart of corn per day. That they would sell for several times what it has cost to raise them, I have not the least doubt. As layers the Brahmas are no "improvement," but in other respects I deem them the most profitable of the various kinds of fowls now in vogue. CIT.

[For the Country Gentleman and Cultivator.]

BEE-KEEPING IN ILLINOIS.

ST. CHARLES, KANE CO., ILL., July 31, 1862.

LUTHER TUCKER & SON—By the above you will observe that your correspondent on bee matters is still in the West I have been at this place since last Autumn, and shall probably remain here for some time—perhaps many years—as I find this an excellent section for bees. The season thus far has been the best for honey that I ever knew. There is no better country for white clover than the West. It grows here in great abundance, hundreds of acres, within range of my bees' flight, being literally covered with it. It has been in constant blossom the past two months, but is now nearly out of blossom. We expect another crop of blossoms soon, provided we are favored with frequent showers as we thus far have been. We have also considerable basswood in this section, which is one of the best honey producing trees in the world. The honey is of superior quality; it is of better flavor than white clover honey. The basswood is now out of blossom. It commenced to blossom and to yield honey about the 15th of July. Bees gather honey from this tree about ten days.

I am establishing an extensive apiary here. I started in the spring with 20 colonies, and now have 55, which are in excellent condition. This increase has been obtained by both natural and artificial swarming. Artificial swarming, however, is the best and surest mode of increasing rapidly Natural swarming is *very uncertain*. If the season continues good, I shall continue to increase my bees by dividing. In one month's time, if honey should be plenty, I could easily increase my present number to 75 good strong colonies. My aim is to purchase bees and to increase my present apiary, until I obtain 500 colonies. My present purpose is to have a *model* apiary in the highest meaning of the term, and the largest in the West. M. M. BALDRIDGE.

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The more a woman's waist is shaped like an hour-glass, the more it shows that her sands of life are running out.

AGRICULTURAL PAPERS.

"The Ohio Cultivator" and "Field Notes," formerly published at Columbus, Ohio, have been consolidated with the "Ohio Farmer," at Cleveland, under the editorship of S. D. HARRIS—a movement quite as much in the interest of the Farmers of the State, we do not doubt, as in that of the proprietors of the journals themselves. We have never regarded the *mere number* of Agricultural Periodicals issued, as at all indicative of agricultural prosperity, or promotive of agricultural improvement—in comparison with the *character and trustworthiness* of those which *are* sustained; and we do not hesitate to say that the support extended to the agricultural press by the farmers of the country, will yield them better and better dividends of interest and instruction, the more it is concentrated upon those papers whose editors enjoy the public confidence, and whose proprietors are firmly established in general favor. The condition of our agricultural papers during the past few years, has been far too much like that of many of our colleges and other educational institutions—the number so great as to weaken far the larger portion of them, or keep them in a continual state of semi-starvation; while the farmers, distracted by the claims, and the competition of the claimants, have often scattered their subscriptions wherever chance might dictate, without regard to the standing or merits of the journals themselves, and sometimes at the risk of losing the money paid by the untimely demise of the paper paid for. The Agricultural and Horticultural Literature of the United States, might stand, without difficulty, at the head of its class throughout the world. We have the means and the intelligence to accomplish this. There is money enough expended upon it in the aggregate, by the farmers of the country to pay its cost. But it has been so crippled and diluted by this distribution into scores of different, dwindling channels, of the stream which might have turned perhaps a half-dozen sets of respectable machinery, that in point of fact we have scarcely anything which we should dare to place side by side with the labored issues of the British press, the well-illustrated and ably-conducted Parisian journals, or the half-scientific, half-practical periodicals of Germany.

In these remarks, we need scarcely say that we intend nothing personal to our Ohio friends. It is only the fear of being thought selfishly desirous of engrossing public support that has lead us to refrain from saying the same thing repeatedly on former occasions, as, during the past thirty years, we have witnessed the feeble births and feebler lives and scarcely regretted deaths, of so many attempts at sustaining professedly agricultural papers, upon the limited support of some one locality or state or section. They have all doubtless performed their share in the advancement of what is really a great and good cause; for by degrees they *have* in some measure operated to attract attention and awaken appreciation for what is higher and better. But, at the same time, they have also, with perhaps a few exceptions, given far less returns for the price they cost, than might have been had at the same time from other sources, and they have lowered the standard and diminished the resources even of our best and oldest journals. And when we speak of "diminished resources," we do not mean in a pecuniary sense, as concerns the publisher himself, who is always forced to a certain extent "to cut his coat according to his cloth," but as concerns the inducements he is enabled to offer for the contributions of able writers, for the experiments of practical workers, for the illustration of his pages, for the very weight and whiteness of the paper on which they are printed. All these points and some others affect the willingness with which leading men will co-operate to sustain a periodical; a writer who neither asks nor expects any money return for the results of that observation or experience which may have been a very costly thing to him in the getting of it,—will still like to have what he writes appear in the columns of a journal possessing some acknowledged influence, where it will not be disgraced by its accompaniments, nor lack attractiveness for inferior mechanical execution—in a word, where there is some honor or pleasure involved in "coming into print." So that there is something above and beyond what money will pay for, (of which, indeed, the foregoing is but a very imperfect illustration,) in the extent to which one's resources for good are prevented from extension, just in proportion to the multiplication of eager competitors with vast pretensions and little if anything to back them. The great principles on which all farming rests, are and have always been the same. And their elucidation and application under different circumstances, will always be treated most instructively *for any one locality*, even in our widely varying country, *through that medium which affords the widest and best means of comparison with the practices of all other localities*, and which unites the most general support in all. This appears to us to be so plainly true as to admit of no question, although it might be illustrated at far greater length; and it is therefore matter of no surprise to us to find in those papers which argue that each district should have "its own agricultural journal," probably nine-tenths of all their practical contents drawn directly or indirectly from the distant sources they decry so loudly as being "inapplicable" or "calculated to mislead."

— It was our intention to close with a single word expressive of the gratification with which we have in earlier times found representatives of *our whole country* united in the columns of this paper, as on common ground, for mutual intercourse and discussion, in which there was heard no voice of hatred and dissension, no sound of denunciation and war. And to ascertain how large a part of our now dismembered Union is represented in these quiet fields of agricultural debate, even during such a time of turmoil as the present, we turned over the numbers of the Co. GENTLEMAN for the last month (July)—the very season at which farmers are least inclined and have the least time to wield the pen—with the following result: during that single month, 20 out of the 24 loyal States,[*] one territory, the three neighboring provinces, together with England and Scotland, contributed original articles for us, being a total of 26 States or countries; and the average number of them represented *each week* during July, was no less than *fourteen.* May the time soon come, when the ten kingdoms of "Secessia" also, shall once more have their representatives both in the columns of our paper and in the Congress of our nation!

STOPPING LEAKS IN ROOFS.—A writer recommends the following: Take four pounds of rosin, one pint linseed oil, and one ounce red lead, simmer together, and apply while hot. We have no doubt it is an excellent recipe, and the cement may be applied to other purposes.

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[*] The only loyal States from which we did not receive and publish communications during July, were California, Rhode Island, Delaware, and Oregon, but going back over the files of the paper for a few weeks previously, would have made up all the four omissions.

AMERICAN POMOLOGICAL SOCIETY.

This society met at Boston on the 17th, and held its biennial session for three days. Nearly the usual number of members was in attendance, sixteen states or territories being represented. The Society occupied the rooms of the Massachusetts Horticultural Society, one of which, a fine spacious hall, was wholly occupied with the tables which were densely loaded with specimens of fruit. Among the larger contributions were a collection of 340 varieties of the pear from President Wilder, 225 from Wm. Reid of New Jersey, over 150 of pears, 100 of apples, and 50 of plums from Ellwanger & Barry of Rochester, N. Y., 160 pears and a collection of other fruits from W. B. Smith of Syracuse, 160 of pears from the Rhode Island Society for the Encouragement of Industry, 131 sorts of apples from T. T. Lyon, Michigan; and many collections from the vicinity of Boston, including 150 varieties of the pear from Hovey & Co. A large share of these were handsomely grown, and, each sort occupying an entire dish, and handsomely arranged, the whole display presented a fine and imposing appearance.

The meeting of the Society was called to order by President **Wilder**, who cordially and with emotion greeted the members on their attendance during the present commotions and public calamities. The first morning session was occupied with the reception of the credentials of delegates, the appointment of committees, and the report of the order of business. In the afternoon the President gave his biennial address, which was marked with all the interest, ability and eloquence which distinguish those given on former occasions. He alluded with great force to the changes which had occurred in the country since the last session in 1860, at Philadelphia—the entire absence of the southern delegation—the great loss the Society had sustained in the death of **Samuel Walker**, one of the founders, and for many years one of its most efficient officers; and its deprivation of the labors of a former President, Dr. **Brinckle**, by his protracted illness. He alluded to the early history of fruit culture in the days of Gov. Endicott, of whose fruit garden, planted more than two centuries since, a bearing pear tree still remains—and to the recent rapid advancement in pomology. He furnished many valuable remarks and interesting facts in relation to the influence of seasons on the fruit crop, and pointed out the necessity of farther investigation in relation to the cracking of pears, and other unfavorable influences—the importance of shelter—and the indispensable necessity of thinning fruit on the trees, to secure the best quality, citing in illustration, the practice which good farmers find essential in giving sufficient space to their hoed crops; and stated that a cultivator of market apples in the vicinity of Boston had been highly successful by thinning the fruit on his trees. The success which had crowned the labors of some originators of new varieties was alluded to, and the gratifying results pointed out in the production of Clapp's and Dana's seedling pears, and Roger's hybrid grapes. The address closed with an eloquent appeal on behalf of the Union, which was received with much emotion by the members.

The election of officers resulted as follows: Marshall P. Wilder, President, James Vick, of Rochester, Secretary, and Thomas P. James, of Philadelphia, Treasurer—with the former vice-presidents from each state. It was concluded after an animated discussion to allow the former vice-presidents in the rebel states to stand, until their position is known.

P. **Barry**, Chairman of the General Fruit Committee presented an able and valuable report, containing a list of the fruits recommended by local committees in 35 districts in seventeen states, with marks attached to each showing what districts had recommended each sort, and giving the local information called for at the last session of the Society in Philadelphia. This report is printed in tabular form, occupies 55 closely printed pages, and shows at a glance not only how many votes each sort has thus received, but indicates every locality where it succeeds. According to this report, the Early Harvest Apple succeeds in 27 of the 35 districts, Red Astrachan in 24, Yellow Bellflower in 19, Fall Pippin in 21, Sweet Bough in 19, Gravenstein in 14, Northern Spy in 13; while Newtown Pippin has succeeded in but two districts, Canada Reinette, Spice Sweet, and others in but one. Among pears, Flemish Beauty, has succeeded in 25 districts, Louise Bonne of Jersey in 24, Doyenne d'Eté in 21, Bartlett in 24, Belle Lucrative and Buffum in 22, Urbaniste in 19, among the more popular sorts, and on the other hand; such fine but little known new sorts as Abbott, Conseilleur de la Cour, Dana's Hovey, &c., have but a single vote each. We give these merely as examples, and showing the great value attached to an extended catalogue like this of 178 varieties of the apple, 122 of pear, 43 of cherry, 55 of peach, 33 of plum, 17 of native grapes, 22 of foreign grapes, 18 of currants, and many others of smaller fruits. A standing committee is to give special attention to the continual perfection of this catalogue,—which already contains a great amount of information not anywhere else to be found.

Most of the remaining time of the sessions was occupied in eliciting information in relation to new and other varieties, of great interest and value, a brief report of some portions of which will be furnished in our next number.

OFFICERS CHOSEN FOR THE COMING YEAR.

President—Hon. **Marshall P. Wilder** of Massachusetts.

Vice-Presidents—S. L. Goodale, Maine; B. F. Cuttler, Pelham, N. H.; J. S. Cabot, Massachusetts; D. Read, Vermont; Silas Moore, Rhode Island; —— Bacon, Connecticut; Charles Downing, New-York; William Reid, New-Jersey; R. Buist, Pennsylvania; E. Tatnall, Delaware; Charles B. Calvert, Maryland; Yardley Taylor, Virginia; Walter L. Steele, North Carolina; Wm. Schley, South Carolina; Richard Peters, Georgia; Jos. L. Moultrie, Alabama; Dr. M. W. Philips, Mississippi; S. M. Wheaton, Tennessee; Lawrence Young, Kentucky; Dr. J. A. Warder, Ohio; ——, Michigan; Wm. Loomis, Indiana; T. W. Felt, Lousiana; C. R. Overman, Illinois; N. J. Coleman, Missouri; Geo. Worthin, Arkansas; V. T. Ambler, Florida; Robert Avery, Iowa; —— Willey, Wisconsin; Simpson Thomson, California; Joshua Pierce, District Columbia; Edward Hunter, Utah; Amasa Stewart, Minnesota; C. B. Lines, Kansas; Wm. Davenport, Oregon; Thos. Affleck, Texas; Hugh Allen, Canada East; D. W. Beadle, Canada West; Robert Jardine, St. John, N. B.

Secretary—James Vick, Rochester, New-York.

Treasurer—Thomas P. James, Philadelphia, Pa.

Executive Committee—President and Vice-Presidents, ex officio; W. D. Brinckle, Philadelphia, Pa.; Richard Peters, Atlanta, Ga.; M. B. Bateham, Columbus, O.; W. L. Steele, Rockingham, N. C.; S. B. Parsons, New-York.

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[For the Country Gentleman and Cultivator.]

Film on a Horse's Eye.

Eds. Co. Gent.—About three months since I discovered a serious film on the eye of a mare belonging to me, which made one eye totally blind. I was advised to try different remedies by different persons—the first was to put in burnt alum powdered, twice a day for several days. This had no beneficial effect, but rather the contrary. I then tried bathing with cold water three times a day, taking it directly from the well. In a week or ten days it began to get better; in two months the sight was restored, apparently as well as the other. J. Sibley.

Gasport, Niagara Co., N. Y.

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We have generally a much stronger curiosity to know what is said, than to know what is true.

Mr. Taylor's South-Down Sale and Letting.

The sale and letting of South-Down Sheep belonging to the flock of Mr. J. C. **Taylor** of Holmdel, N. J., took place Sept. 3d, as advertised, drawing together a larger company of interested spectators and bidders than might have been anticipated at the present time. Indeed the assemblage was not only considerably larger, but the result much more gratifying than at any of Mr. **Taylor's** previous sales. When *fifty head* of South-Downs can be disposed of, lambs and all, *at an average of very nearly forty dollars per head*, there is little reason for complaint; although it must be added that when the prices are taken individually, many of the sheep, of both sexes, went at a *very low figure*, in comparison with their value and the cost of their immediate progenitors, and were therefore great bargains for their purchasers.

We are not yet in this country quite up to the English system, so convenient and so economical both for breeders and flock-owners, of *renting rams*—doubtless owing very greatly to the much longer distances from which many buyers come to the point of purchase, and the therefore heavy cost of transportation and increased risk of accident. Only five rams were rented, consequently, at Mr. Taylor's,—in fact only seven were offered—but the price at which they went was a good one, averaging over $60—including one at $100 to **Peter Lorillard**, Esq., of Westchester Co., N. Y. The highest priced ram sold, was a shearling of Reserve's get, which went to Judge **Chaffee** of Ohio, for $80; the next highest, also a "Reserve" lamb, went to Mr. **Phineas R. Close**, an enterprising farmer of Connecticut, who is getting up a valuable South-Down flock, now numbering about 20 head. Judge **Chaffee** also took the two highest priced ewes, respectively at $65 and $57.50, but he was quite closely followed by Mr. A. C. **Sisson** of Luzerne Co., Pa., who was one of the largest and most judicious purchasers present. Hon. A. B. **Conger**, who was not there in person, was quite a large buyer; and toward the close of the day the auctioneer might have been observed most carefully watching for the decisive nod of the great Chicago farmer, Hon. **John Wentworth.**

The list of purchasers will give an idea of the company present. Among others not there named, were Col. **Lewis G. Morris** and **Jas. L. Morris**, Esq., of New-York; **Samuel Thorne**, Esq., of Thorndale; A. B. **Allen**, Esq., of New-York; O. **Judd**, Esq., of the Agriculturist, just returned from three months among the flocks and herds and travel-routes of Europe; E. **Comstock**, Esq., of the Argus; Mr. D. **Heywood**, a Columbia County South-Down breeder; **Thos. Bell** of Eatontown, and many other New-Jersey farmers, who regarded with evident gratification the success of their neighbor's efforts to maintain a flock of standard value and reputation throughout the country.

We ought not to close without a single word as to the fine order in which the Sheep were so uniformly found—not high enough in condition to risk their breeding, as Mr. **Taylor** is fully convinced, but showing a predisposition to take on flesh, remarkable for its manifestation with scarcely a single exception throughout the whole flock. For intance, in the field of ewes containing sixty head of a breeding age and sixteen shearlings, this uniformity was the subject of general observation; but, in answer to our inquiries as regarded the feeding they had had, we found that no variation had been made from Mr. **Taylor's** regular system as described in our account of the flock last winter—viz.: *not to feed the ewes at all* after April. The 60 ewes in this field had raised 76 lambs, which came in March; they were fed somewhat during March and April while the lambs were most heavily taxing them, and the total amount of the food which each one had consumed during a whole year previous to this Sale, did not exceed 18 cents' worth of oats.

We give below the details of the sales and lettings effected:—

SHEARLING RAMS SOLD.

No.	Sire.	Dam's Sire.	Purchaser.	Price.
1.	Vigor	Young York	L. Hasbrouck, Kingston, N. Y.,	$45.00
5.	Young Prize,	do.	do.	45.00
8.	do.	(dam imp. 1856)	Geo. Bachelder, Stanstead, C. E.,	52.50
10.	Reserve	Young York	T. R. Davis, Westchester, Pa.,	42.50
11.	do.	World's Prize	(passed.)	
13.	do.	No. 14, imp. 1859	N. L. Chaffee, Jefferson, O.,	80.00
15.	do.	No. 29, do.	Wm. Bluck, West Lafayette, O.,	50.00
17.	(Twin to No. 15)		J. P. Thomas, Chester Co., Pa.,	55.00
22.	Reserve	World's Prize	(passed.)	
23.	do.	do.	Henry Pyle, Columbiana Co., O.	40.00
25.	do.	Master Fordham	Lewis Houcks, Chester Co., Pa.,	52.00
26.	do.	Frank	Phineas R. Close, Greenwich, Ct.,	61.00

RAM LAMBS SOLD.

2.	"No. 89"—dam imported 1861, —— ——, New-York,	$30.00
4.	do. do. Sanford Howard, Boston,	25.00

EWES SOLD.

44.	Shearling—by Vigor—A. C. Sisson, Waverly, Pa.,	$32.00
45.	do. do. do. do.	40.00
46.	do. by Young Prize—N. L. Chaffee, Jefferson, O.,	65.00
48.	do. Reserve—J. P. Thomas, West Chester, Pa.	37.50
51.	do. do. Geo. Bachelder, Stanstead, C. E.,	37.50
55.	do. do. Henry Ingersoll, Philadelphia, Pa.	40.00
9.	Two Shear—by World's Prize—N. L. Chaffee,	57.50
33.	do. do. A. C. Sisson,	52.50
38.	do. do. do.	42.50
42.	do. do. N. L. Chaffee,	35.00
27.	Three Shear-- do. Henry Ingersoll,	40.00

EWE LAMAS SOLD.

66.	By Reserve—dam by World's Prize—Hon. Jno. Wentworth.	$33.00
68.	By Webb's Favorite—dam by World's Prize, Hon. A. B. Conger, Haverstraw, N. Y.,	35.00
69.	By Reserve—dam by Young York—Wm. Bluck.	31.00
72.	By Webb's Favorite—dam bought of Col. Morris—William Bluck.	31.00
75.	By "No. 89"—by dam World's Prize—Hon. A. B. Conger.	41.00
77.	do. do. do. do.	37.00
81.	Webb's Favorite—dam by Frank—Wm. Bluck,	32.00

OTHER RAM AND EWE LAMBS SOLD—PEDIGREES NOT SPECIFIED.

Ram Lamb—purchased by	Chas. H. Conover, Marlboro, N. J.,	$13.00
do. do.	J. Archer, Illinois.	27.00
do. do.	J. J. Conover, Allentown, N. J.,	25.00
do. do.	A. Norris, Spencer, N. Y.	21.00
do. do.	Rev. Mr. Schenck, Marlboro, N. J.,	14.00
do. do.	J. J. Conover, Allentown, N. J.	14.00
do. do.	do. do.	14.00
do. do.	I. K. Demott, Hunterdon Co., N. J.,	18.00
Ewe Lamb—purchased by	Hon. John Wentworth, Chicago, Ill.,	26.00
do. do.	do. do.	16.00
do. do.	do. do.	16.00
do. do.	do. do.	24.00
do. do.	do. do.	21.00
do. do.	do. do.	21.00
do. do.	do. do.	22.00

RAMS RENTED FOR THE SEASON.

106.	Two-Shear—imported from Webb, 1861—Hon. A. B. Conger,	$52.50
14.	do. "Young Prize,"—Henry Ingersoll, Esq.,	25.00
24.	Shearling "Young Park Ranger,"—P. Lorillard, Esq.	100.00
21.	do. "Young Norwich." N. C. Sisson.	80 00
12.	do. Sired by Reserve—Hon. A. B. Conger,	47.50

SUMMARY.

10 Shearing Rams sold, averaged.	$52.30	Total,	$523.00
11 Ewes averaged	43.60	do.	479.50
10 Ram Lambs averaged.	20.10	do.	201.00
14 Ewe Lambs averaged,	29.00	do.	386.00
5 Rams rented for season averaged,	61.00	do.	305.00
			$1,894.50
Total sold and rented 50, averaging,	$37.89		

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[For the Country Gentleman and Cultivator.]

IT PAYS TO IMPROVE FARMS.

In 1858 I thoroughly underdrained my west lot of 40 acres, using the inside walls and loose stones to fill the drains. In 1859 I gave the land a liberal dressing of of barnyard manure and leached ashes, and took off a good crop of corn. In the summer of 1860 my crop of oats was large. In the fall I applied a light coat of manure, and twenty bushels of ground bone to the acre, and seeded down half the lot with wheat, and the balance with rye. In 1861 the crop of grain was fair. This year the lot produced 120 tons 477 pounds of hay—over 3 tons per acre, being fully six times as much as the yield previous to 1859. **Warren Leland.**

Highland Farm, near Rye, Westchester Co.

CROPS IN GREAT BRITAIN.

For awhile we had advices, dating from the last of July, of a brightening harvest and improving crop prospect in Great Britain. But the latest intelligence now exhibits a relapse of unfavorable weather, and the estimates of those most competent to judge prove, conclusively that the Wheat in the United Kingdom is turning out more poorly than has been the case before in several years.

The London Agricultural Gazette (August 16,) has just gathered in its customary harvest reports from about 200 correspondents in every grain-growing county in Great Britain, and the following is the tabular epitome of these returns:—

Crops.	Over Average.	Average.	Under Average.	Total Reports.
	No.	No.	No.	No.
Wheat.	1	37	150	188
Barley, ...	26	108	53	187
Oats, ...	37	108	55	200
Beans,... ..	42	80	13	135
Peas, ...	10	73	23	106

The editor of that journal accompanies the detailed statement with these remarks:—

"It results from these figures that the wheat crop is very inferior, that barley is barely an average crop, that oats are a fair average, that beans are generally good, and peas on the whole a fair crop. There can be no doubt, if the gentlemen who have favored us with their opinions have taken only ordinary care in forming them, that the wheat harvest crop of 1862 is one of the worst we have had for many years. There has always hitherto, on the occasion of these annual returns, been, among two hundred correspondents, a considerable proportion who have declared the crop to be over average, even where the preponderance of opinion and the ultimate experience lay all the other way. We have never before had to report that of 188 reporters there is only one who speaks of the crop in his neighborhood as being 'very good'—and he is from an Irish county whose wheat crop has no great influence on the general supply of the year. And it is a still worse report of the information which has reached us, that out of 188 there are no fewer than 150 who declare the crop to be inferior—only 37 who anticipate an ordinary return. Storms of wind causing the plant to be root-fallen before the seed was fully formed—'red gum' and 'mildew,' the consequence of an unkindly summer—have produced their natural result, a deficient harvest."

In the Mark Lane Express of Aug. 18th, we find the following remarks on the Wheat supply for the coming year:—

"With all our extended breadth this season, it seems doubtful whether we shall reap an average gathering. But as our popular increase is not so stationary, and we begin with nearly empty granaries, and, as regards old corn, with almost clean barns and rick-yards, so we must again be in the condition of large importers all the year through. It is indeed well that our neighbors, the French, report about an average yield, and their first gatherings, with favoring markets, may soon be dropping in, instead of their requiring another million qrs. of English growth. Without, then, unforeseen damage in our fields, there is no fear of obtaining all needed supplies; but, at the same time, there is no prospect that prices will descend to that low scale which, till lately, some were expecting as the consequence of a superabundance."

As to the Potato Crop, which is not included in the above reports, the North British Agriculturist of Aug. 20th, says:

"The recent heavy rains have caused increased apprehension as to the ultimate fate of the potato crop. In several of the English counties the blight has appeared, and in the more southern counties the haulms and tubers are rapidly decaying. In Scotland the potato fields show a deficiency of plants, and these are generally weak and stunted in appearance. In Ireland the potato crop is reported to be very inferior. Taking the United Kingdom as a whole, the half of an ordinary crop is all that can be calculated upon, even with the occurrence of dry weather for the maturing of the tubers."

The paper last quoted, concludes its article thus:—

"There can be no question now that unusually large imports of grain will be required, and that an advance in prices, particularly of wheat, will rule for some months. The accounts from the United States are not very favorable, some apprehending that the raising of such a stupendous army during the present month, when the wheat harvest is just completed, but the maize and other crops yet remaining unharvested, will prevent extensive shipments of grain to this country; we will, therefore, require probably to draw the greater portion of our supplies from the Black Sea provinces of Russia and other Continental States."

We have fewer fears for a serious result from the army recruiting, upon the production of this present season, than upon that of 1863. There must be a large surplus for exportation from this year's crop; but it cannot be impressed too earnestly or too forcibly upon the Farmers of the United States, that *every acre* ought to be seeded, either to winter grain at once or to spring grain when the season opens, which *can possibly be put in by the utmost exertion.* The recent calls for so large an additional force cannot fail to press heavily upon the agricultural labor of the coming twelvemonth.

PROPAGATION BY CUTTINGS.

The process of propagation by cuttings is simple, and with ordinary care is usually successful. The theory is, that slips or cuttings of most species of plants, if plunged for part of their length in moist sand, and kept close and shaded from the sun, will emit roots and soon become capable of growth under ordinary circumstances and with no special protection. This emission of roots is much hastened by the application of bottom heat; that is, heat so applied that the bed of sand in which the cuttings are placed may be heated. This heat must be slight, but should be constant and steady, and is most perfect when it can be obtained by means of hot water, which will maintain a more uniform heat than any other method of warming. In a well constructed and well managed propagating bed, most cuttings will rapidly strike—those of some sorts of verbena, for instance, beginning to emit roots in twenty-four hours after being placed in the bed.

Cuttings should be made from growing shoots and should include several joints or leaves, the cut being made just below a leaf. The cuttings should be inserted half or two-thirds their length in the sand, first cutting off the leaves on that portion of the slip which is in the sand. Two or three cuttings may be placed in a small flower pot filled with sand and covered with a tumbler, and will grow in most cases quite readily without bottom heat. The length of a cutting is not very material; if long enough to contain several joints it is sufficient. When cuttings begin to grow vigorously it is generally an indication that they have rooted, but this is not certain. They can very easily be taken up and examined, and if no roots appear they can be plunged again.

Any kind of sand may be used for striking cuttings in, but white sea sand is generally used, being sharp and clean, both desirable qualities.

Cuttings of geraniums and other fleshy plants may be laid on a shelf to dry for several days before plunging, and should not be kept too moist or close after they are in the sand or they will rot.

Very neat propagating stands may be obtained at some of the seed stores, having a small spirit lamp underneath for heating water to give the proper bottom heat. G. B. H.

THE CULTIVATOR.

ALBANY, N. Y., OCTOBER, 1862.

REPORT OF THE COMMISSIONER OF PATENTS for the Year 1861. AGRICULTURE. Washington: Government Printing Office.

A copy of this recently issued "Report" has just been sent us by the Bureau of Agriculture. It differs in some respects from its predecessors; on the whole, it should perhaps be classed as an improvement upon many of them. We do not know who is responsible for the arrangement of the volume; the name of the present chief of the Bureau nowhere appears in it, either as an author or otherwise.

Far the larger part of the volume is made up of short articles contributed by various writers in different parts of the country, and partaking more of the character of the ordinary communications in our Agricultural papers, than that of essays or elaborate treatises. This gives a greater variety than usual, makes the book more readable and more generally interesting, while at the same time its contents are not quite up to the standard which we shall sometime hope to see them attain. One great fault almost everywhere apparent, is the carelessness of the editor or proof reader in charge. The Experiments of *Lane* (Lawes) and Gilbert are referred to for example, and the Hereford importations of Corning & *Latham* (Sotham) of Albany; the authors of several papers suffer very badly —Jos. Cope of Pennsylvania, being transformed into Jos. Cape, Jas. S. Grennell, of Massachusetts, into Jas. P. Gunnell, and R. S. Fay into R. S. Tray, although the last is corrected in the index. We have not examined the book very carefully with a view to the detection of such errors, but when they occur so prominently, no one can help observing them, and distrust is excited as to the correctness of other and more important details.

The leading paper in the volume is one which D. J. Browne was despatched to Europe to compile, on "The History of Flax," occupying 80 pages. The culture of Flax and Hemp follows, in 35 more, by O. S. Leavitt. There are a number of detached articles on Sheep and Wool Growing, from W. S. Colohan of Pennsylvania, Robt. George of Ohio, Jos. Cope of Pennsylvania, R. S. Fay of Massachusetts, T. M. Younglove of Steuben Co., N. Y. Cattle receive attention in one of the most judicious and valuable papers presented in the volume, occupying about 40 pages, and giving a condensed and entirely trustworthy account of the different improved breeds, from the pen of Francis M. Rotch—the only point in which the writer appears perhaps not so thoroughly posted from personal knowledge, being with reference to the Scotch cattle, which we notice he refers to wholly under the head of "Galloways," while in Scotland they recognize two divisions beside the Galloways, viz., the Angus or Aberdeen, and the Highland or "West Highlanders." The last mentioned is not a breed of so much importance, having received less attention from skillful breeders, and indeed inhabiting a rough country for very highly improved stock to come from; but our very successful friend, Mr. McCombie of Tillyfour, would by no means like to see his *Aberdeenshire* herd classed among the *Galloways.* We notice moreover that these distinctions, recognized for years by the Highland Ag. Society, are beginning to claim attention in Canada, and we should like to have seen them referred to in the article before us, although the omission by no means ranks as a serious defect, in comparison with its other merits.

This digression has occupied more space than we intended. The different Fruits receive a fair share of attention, particularly grapes about which it seems as though the thirst for information must be quite insatiable. There is a sound and useful article, if readers will devote to it the attention it deserves, on the philosophy and chemistry of Manures. "Ruth Hall" compiles "a few words on horses," and Mr. Flint gives an article on the Horses of New-England. Mr. Clift has an essay on the reclamation and value of Salt Marshes. Mr. Bollman of Indiana treats the subject of Indian corn. Mr. Grinnell sketches the Agriculture of New-England. Mr. Marshall of Oneida Co., contributes a few pages on Hop Culture. Mr. Hedges discusses at length Sorghum Culture and Sugar Making. Twenty pages, forming a curious jumble of odd scissorings from the newspapers, are adorned with the high sounding title of "Notes on the Recent Progress of Agricultural Science, by David A. Wells," in all of which there is not much "agriculture," and still less "science," to be found.

Knowing as we do most fully, how difficult it is to make up such a volume that shall not be open to criticism, we desire to refer as kindly as possible to the weak points in the one before us, and repeat that it shows some evidence of improvement in having perhaps secured, on the whole, a better and more practical class of writers than heretofore.

☞ The inventors, the mechanics and the farmers of the country, through such agencies as the New-York State Agricultural Society, last year asked Congress for a small appropriation to pay for fitting up an American department in the International Exhibition, and for the transportation thither of what we had to show. In the language of the street boys, Congress "couldn't see it!" "Perfidious Albion," as the Frenchmen call her, did not deserve this mark of our high consideration. So said our illustrious representatives.

They "could not see" that the inventors of the country asked the appropriation—not as a favor to England by any means—but with the selfish, though not altogether improper view of making money out of the English pocket, and selling their wares and inventions both to Europe and all its dependencies. They could not look upon the appropriation asked, in the light of an investment which would bring far more money back into the country than was taken out of it;—in the light of a pecuniary advantage to our people, as well as a matter of national credit to us.

What has been the result? A few enterprising Americans are represented, where we might have had hundreds; among these few, one single little invention, which would be regarded probably as altogether too insignificant even to be named in Congress, has brought its inventor as much money as Congress was asked to give for *the expenses of the whole American department!* We cut the following from the last number of the London Field:

> MILKING BY MACHINERY.—The American cow-milker in the Exhibition, which has attracted and is attracting so much attention, has been sold, as far as the European rights are concerned, to Messrs. Watkins & Keen of Birmingham, for the pretty little sum of 5,000*l.* cash, with a good royalty. The orders for the machines are flowing in so rapidly as almost to exhaust the supply of manufactured "milkers" which are being produced at the rate of fifty a day.

In other words, a "cow-milker" alone, has refunded to the country all that it was necessary to spend to be well represented; while the large sales of other patents, of far greater value than this trifling affair, would have been so much clear gain, and we should have had the pleasure into the bargain of demonstrating more fully than we could by any other means, that the United States are not altogether "gone to the dogs," and in a state of perfect commercial ruin and social anarchy, as our kind friends of the London Times have delighted to represent us.

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☞ We are pleased to announce the safe return of Hon. E. Cornell, President, and Col. Johnson, Secretary of the State Agricultural Society, from their recent journey in Europe. They reached Albany on Thursday evening of last week, having arrived at Boston the evening previous, after a return voyage shorter and more favorable than usual. At the session of the American Pomological Society at Boston, Col. Johnson made a brief speech on Thursday, which was received with great enthusiasm. He presented an invitation from the Royal Horticultural Society to American pomologists, to send fruits for exhibition.

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Sale of Devon Stock.—The following sales were made at Meriden, Conn., on Wednesday of last week, from the herd of R. Linsley: Cows sold to E. H. Hyde, 2d: "Majestic," imported; "Chance;" "Nelly Bly;" "Nelly Bly, 2d;" "Fairy 5th," 2 years old; also "Prince John," a yearling bull. To John Wentworth of Chicago: "Fairy 2d," and heifer calf; a bull calf out of "Nelly Bly;" "Empress Eugenie, 2d," 2 years old. To Thos. B. Buffum of Newport, R. I., a bull calf out of "Chance." To Levi Yale of Meriden, "Nelly Bly 5th." The prices were so unsatisfactory, says the Hartford Courant, that the sale was adjourned.

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☞ Mr. P. V. Vanderveer of Glenville, Schenectady County, has purchased from the herd of the Hon Ezra Cornell, Ithaca, N. Y., a very promising Short-Horn bull calf, sired by the Duke of Oxford 2780, and out of one of Mr. C.'s Alexander heifers, "Mary Cattley, 2d," by Doctor Buckingham (14,405.)

◆

Saratoga Co. Fair.—The annual exhibition of this Society was held at Saratoga Springs, Sept. 2–5, and was well attended. The entries were 167 ahead of last year. The following officers were elected for the ensuing year:

President—Samuel J. Mott. Saratoga.
1st Vice President—Edward Edwards, Corinth.
2d do. do. —Lewis E. Smith, Halfmoon.
Recording Secretary—J. A. Corey, Saratoga Springs.
Corresponding do. —Jas. Thompson, Milton.
Treasurer—Milo J. Jenings, Saratoga Springs.

◆

A Good Devon Milker.—I saw a statement in your issue of July 10, raising the question as to what breed of cows are the best milkers, and inviting information and reports on the subject. I have been visiting Mr. John Corp of Freetown, in this county, who has for the last nine years given much attention to raising blooded cattle. I have conversed with Mr. C. considerably upon the subject of the different breeds. He showed me on his farm, some of the finest Devons, cows and heifers, I have ever seen in this State. One of them, "Nancy Dawson," (912, Davy's Devon Herd-Book,) during the first seven days of October last, made 12½ lbs. of butter, the cream only being churned—she is always milked in the usual manner, twice per day; sixteen quarts of her milk made 2 lbs. of butter—once 2 lbs. 3 oz. D. R. P. W.

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☞ The Yates County Ag. Society holds its Show this year at Penn Yan, Oct. 9 and 10. The premium list is a liberal one, including, as usual, numerous copies of the different Agricultural Journals. President, Guy Shaw; Secretary, John Mallory.

A Fine Barn.—In a recent ride from Macedon to Rochester, I stopped to examine the fine new barn of J. Lord, near Pittsford. The owner is an admirer of fancy horses, and the barn was built with a view partly for their accommodation. It is of wood, vertically boarded, battened, and painted, and presents a handsome exterior. It is somewhat in the form of a T, the top being the front, which is about 45 by 95 feet. The rear is about 40 by 80 feet, besides over 100 feet sheds. The front portion is occupied with horse-stalls on the left, and a spacious carriage-room on the right; between which and conveniently adjacent are feed rooms, harness rooms, watering apparatus, &c. The interior is handsomely painted and grained and kept in neat order. The racks for feeding hay are an interrupted narrow space in front of the horses, filled from the hay-loft above, and boarded to shut out hay-seed and dust, except a grated opening directly in front of the horses' heads. A box, shutting tight, under each manger, keeps the straw in its place till wanted for use. A strong rope, with ring and hook, extends across the rear of each stall from post to post, to prevent the horses from backing out too far while secured by the halter, and from kicking each other, and is an additional safeguard against their getting loose in the barn.

The barn cost $5,000, which nearly accords with the rule for estimating the cost given in the last Illustrated Annual Register, namely, one dollar for each two square feet of surface, when the barn is planed and painted, with an additional allowance for the expense of extra finish, harness-rooms, office, &c.

The farm contains 350 acres. J.

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☞ The Vermont State Fair at Rutland last week, appears to have owed one of its main attractions to the simultaneous meeting of the Wool Growers' Convention, an extract from the proceedings at which will be found in another column. The sheep, moreover, are said to have formed, to the number of four or five hundred, the principal feature of the Fair, while the Morgan horses, for which Vermont is so noted, made a pleasing display, including about 100 entries. The cattle were usually good, but few in numbers. Only a few entries of butter and cheese were on exhibition. Of fruit there were but few varieties, apples taking the lead. The receipts are said to have been between three and four thousand dollars, being enough to cover all expenses incurred.

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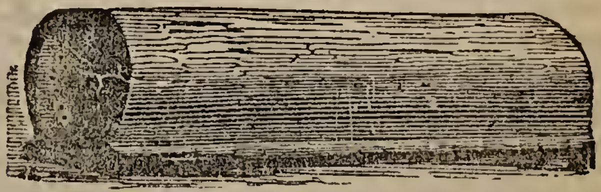
☞ Portugal has decreed that the free introduction is permitted of foreign cereals, wheat, corn, rye, barley, and oats in grain, flour and baked bread, through the inland and maritime of the kingdom, until the end of April, 1863. This looks as if Great Britain was not the only European country likely to suffer from short crops the present season.

NEW-YORK STATE TILE WORKS,
Near the Corner of Lark & Lydius-Sts.,
Albany, N. Y.,
WM. M. BENDER, Proprietor.
GEO. JACKSON, Superintendent.



The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smaliest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

N. B.—Drainage to any extent and at any place done by contract and tile furnished for the same. Ap 10—w—Jy 1—m1yr.

Also DRAINING TILE MACHINES for sale, of the latest improved Patterns. For further particulars address as above.

Inquiries and Answers.

Horse Powers.—I wish to make inquiry of you or others that know whereof they affirm, through the columns of your paper, as to the best Endless Chain Horse Power, for two horses, with thrasher and cleaner? Also the amount of work they will perform in a day, say a good fair days work? W. H. Benson. *Chautauqua Co.* [Our correspondent cannot do better than to request the manufacturers of the several Horse Powers advertised during the past few months in our columns, to send him descriptive circulars of their respective machines, and then judge for himself as to which will suit him best. Between the three or four most widely known makers, the choice is quite evenly balanced. — — The same answer will apply the inquiries of Alex. Day, of Ireland, Mass., since received, who wishes to know "which is the best thresher for a farmer having 300 to 500 bushels of grain a year, and whether a one or two-horse power is preferable."]

Stump Pullers.—"One who has tried it" inquires last week for a Stump Puller. He can procure what he wishes of Messrs. R. H. Allen & Co., 189 & 191 Water Street, New York. They have Willis' machine in two sizes at $150 and $200 respectively, and give it the preference decidedly over all others;—also Hall's, a small machine at $60, and Bates' Patent at $80.

Drill Barrow.—Can you inform me which is the best hand machine (to be used by one person) for drilling in carrot, turnip and beet seeds? Is there one, in which the seed can be seen by the operator as it drops into the ground? Unless able to see the seed passing from the box, the operator is liable to go over a considerable space, if the machine gets clogged, before discovering it, causing an annoying irregularity in the coming up of the seed. G. L. *New Brunswick, N. J.* [We do not know of any drill in which the dropping of the seed can be seen during the operation. Good drills, however, very rarely clog; and when they do, the operator quickly perceives the altered sound. Emery's six dollar drill would doubtless answer the purpose intended. He sells a smaller one for $3.]

Soft Soap for Fruit Trees.—Would there any injury arise from an application twice yearly of soft soap of about the consistency of paint, to all kinds of fruit trees? It is death to borers, and I thought it might be to trees when used too freely. I clear the ground away to the roots, and let the soap that runs down remain about the roots, which would be on a small tree, two tablespoonfuls. I don't think I have a borer on my place at this time. J. M., Jr. *Leavenworth, Kansas.* [The soft soap will not injure the trees. It tends to prevent the borer from laying its eggs in the bark, but it will not kill the insect when once in. The only way then, is to punch them to death in their holes.]

Apple Seeds.—What is the best method for removing the apple seeds from the waste, after making the cider? A Subscriber. *Washington Co., Ill.* [Break up the pomace in a box or tub of water, and the seed will settle to the bottom, when the pomace may be racked off. Repeat the process until the seeds are quite clean.]

Peach Orchard.—I am about to set a peach orchard, and wish you would inform me through your Cultivator the kinds to set out—1st. What kind will yield the best for market, and if there is any difference about the frost killing them in the spring? Whether the late ones or the early are best, and what time is best to set them out, and if the trees would be any better off if obtained from some other State. A Subscriber. [Among the best peaches for market are Serrate Early York for very early—then Cooledge's Favorite, Large Early York, Crawford's Early, Early Barnard, &c. Later ones are President, Oldmixon Free, Late Crawford, and Ward's late free. There is but little difference as to the frost killing these sorts, although Cooledge and Early Crawford are regarded as among the hardiest. As a general rule spring is the best time to set them out, but they may be obtained from a distance in autumn, and safely heeled in till spring, by covering the roots and most of the stems with fine earth, filling it in well among the interstices, and guarding against mice. The great leading requisite of all is to keep the ground thoroughly cultivated and mellow always afterwards.]

Stump Machines.—"One who has tried it" makes inquiry through the columns of your paper about stump machines. In answer I would say, that we have a kind here that your correspondent has probably *not tried*, or he would hardly be inquiring further. For the information of any or all concerned, I would state that the design is the lever purchase—the cost $200 to $300, according to strength—the power equal to the ousting of pine stumps at the rate of 20 to 80 per day, according to size, and it is manufactured here, where it originated and has been extensively used for a number of years. I have worked with one for the past six years; consequently speak knowingly. If "One who has tried it," will send me his address, I will furnish him with more particulars if he wishes. W. H. Benson. *Jamestown, N. Y.*

Rat Trap.—I would be pleased if you would publish in your next paper the best rat trap that you know of. H. S. C. [We know of nothing better than the common wire trap, which can be procured for four or five shillings. With one of these traps a smart boy can soon rid a place of rats.]

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[For the Country Gentleman and Cultivator.]

Remedy for "Foul" in the Foot.

Eds. Co. Gent.—In your paper of July 3, 1862, you inquire for a cure of the "Fouls" in cattle. Enclosed I send you a certain remedy:

Cast the animal, and then wash and *soak* perfectly clean, the whole hoof—with a *sharp* and small bladed knife pare right down to the "seat of war;" but do not start the blood. After which "swab" with butter of antimony. When that has dried on, bind up the hoof in a poultice of

1 pint boiled linseed oil,
¼ pound blue vitriol,
¼ pound verdigris.

The verdigris and vitriol to be pulverised as fine as flour before mixing with the oil.

In a week's time take off the bandages, and if the "critter" is not perfectly sound at the end of another week, you can make up your mind that you have not pared so that the medicine has touched every spot and "crease."

I should have stated that the washing must be done with "soft soap and rain water."

I have cured numbers of cows in this manner. They are very apt to be troubled in this way on farms where hoof ailed sheep are kept, or have been kept.

Cortland, Sept. 8, 1862. PETER P. PETERS.

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[For the Country Gentleman and Cultivator.]

GREAT CROP OF CORN.

Editors Co. Gent.—Sometime last winter I read an account of somebody in Agawam, who had raised one hundred bushels of corn to the acre, and I did not then believe the story. I then supposed, and still suppose, that I can and have raised as good corn as any of my neigbors. But that account set me to thinking how it could be done, and I think I can now beat the story from Agawam.

Last April I plowed my turf, (which had been mowed for several years,) very shallow—perhaps four inches deep. I did not harrow the land at all, but furrowed it out with horse, put a small shovelfull of compost manure in the hill, and planted an early sort of corn which I have raised some 20 years. When the corn was ripe enough to cut up, I measured and counted till I was satisfied that there are 4,400 hills on an acre. I then picked a small patch, husked the same, and hung the ears in the sunshine to dry, and when dry enough to shell well, I shelled it and weighed the shelled corn *very carefully*, and from that weight I calculated the weight on the acre, which is 8,112 lbs., making 144 bushels and 4 quarts per acre. The corn is now on the lot, and any one wishing to see it can do so.

When we hoed the corn the last time, I scattered a very little turnip seed all over the land, and appearances now indicate that I shall have a fair crop of turnips.

Near Springfield, Mass., Sept. 15. C. B.

◆

"All maidens are good," says one moralist; "but where do the bad wives come from?"

TRUE DELAWARE GRAPEVINES—

PROPAGATED FROM THE ORIGINAL VINE,

PLANTS OF THE BEST QUALITY

AT LOW PRICES.

Strong 1 year old, well rooted, Delaware Vines, 30 to 60 cents single; $3 to $6 per dozen; $20 to $40 per hundred. Extra strong layers from bearing vines, and 2 year old selected vines for immediate bearing, $1 to 1.50 each, with reasonable deduction by the quantity.

Also superior plants of Allen's White Hybrid, Anna, Alvey, Brinckle, Black King, Cassady, Creveling, Cuyahoga, Clara, Concord, Clinton, Catawba, Diana, Elsinburg, Golden Clinton, Graham, Garigues, Hartford Prolific, Herbemont, Isabella, Lenoir, Logan, Lincoln, Louisa, Lydia, Maxatawney, Manhattan, Marion Port, Oporto, Offer or Raisin Grape, Ontario, Perkins, Raabe, Rebecca, Rogers' New Hybrids, Nos. 1. 2, 3, 4, 5, 9, 13, 15, 19 and 33, To Kalon, Taylor's Bullitt, Union Village, Venango, and many others.

RASPBERRIES—Catawissa, ever-bearing, and Kirtland's Seedling.

CURRANTS—White Grape, White Transparent, Cherry and Black Naples.

STRAWBERRIES—Triomphe de Gand, Wilson's Albany, Jenny Lind, Trollope's Victoria, and Austin Shaker Seedling.

☞ Send for Descriptive Catalogue.

GEORGE W. CAMPBELL,
Sept. 11—w6tm1t. Delaware, Ohio.

50,000 NATIVE GRAPEVINES

for sale at very low prices by the quantity, by
Aug. 28—wtf.m3t. HEFFRON & BEST, Utica, N. Y.

STANDARD PEAR TREES.—

THOMAS & HERENDEEN

offer for sale, at Union Springs, N. Y., many thousand Standard Pear Trees, of fine, vigorous, well ripened growth,

PROBABLY UNEXCELLED IN THE COUNTRY,

consisting of Bartlett, Lawrence, Sheldon, Flemish Beauty, Virgalieu, Seckel, Onondaga, Doyenne d'Ete, Madeleine, Belle Lucrative, Tyson, Anjou, and several other varieties. These were grown on unmanured land under the immediate care of J. J. THOMAS, are two and three years old, and are offered at $25 per 100, fine selection, or $30 per 100 extra fine.

Also for sale at Macedon

20,000 Superb Two Year Dwarf Pears,

at low prices, and a general collection of other fruit trees.
Sept. 4—wcow3t.

FOR SALE.—

The subscriber wishing to give up the farming businesss, offers his farm for sale, lying on Torringford Street, near Wolcottville, Winstead, New-Hartford, which afford the best of markets for the products of the farm. It contains about 115 acres, 40 of which is woodland, estimated at 2,000 cords, which will pay for the farm, delivered on the Naugatuck Railroad, 1½ miles distant. The buildings are first rate, most of them having been erected within a few years. It is well known as one of the best farms in this section, being in a very high state of cultivation, never having any hay sold from it. Also plenty of orcharding of grafted fruit. It is within a quarter of a mile of church and schools. The farm will be sold at a low price, and part of the purchase money may remain on mortgage if desired.

JOHN GILLETT,
Sept. 1—m2t. Torringford, Litchfield Co., Conn.

LODI PHOSPHATE,

Composed of RAW BONES dissolved in sulphuric acid, Night Soil, Guano and Wool Dust, made by the

LODI MANUFACTURING COMPANY

EXPRESSLY FOR

WINTER GRAIN AND GRASS LANDS.

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1863 THE ILLUSTRATED ANNUAL 1863
REGISTER OF RURAL AFFAIRS.

NO. IX---FOR 1863.

The publication of the NINTH NUMBER of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, for 1863, has been somewhat detained for the completion of a very full and valuable Treatise on Entomology, including those Insects about which there is now the greatest desire for general information, from the accomplished pen of the State Entomologist, Dr. ASA FITCH. We are happy to say that this article is now in the hands of the printers, and that the ANNUAL REGISTER will be ready for issue about the 20th of October. Meantime orders will be received and registered as usual, and at the usual rates:

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  1. Sap Boilers.
  2. Evaporators.
  3. Processes of Collecting and Boiling the Sap.

III. BEST WAY TO BUILD A HOUSE—FORTY-EIGHT ENGRAVINGS.
  1. Introduction.
  2. Carpenter's and Mason's Specifications.
  3. Illustrated Glossary of Architectural Terms.

IV. THE DAIRY—SEVEN ENGRAVINGS.
  1. Hints on Butter Making.
  2. Rules for Making Cheese.
  3. Rules for Management of Cows.

V. RURAL ECONOMY—SIX ENGRAVINGS.
  1. Suggestions for Winter.
  2. Screwing on Nuts—Leaky Roofs—Horse Fork—Painting.
  3. To Avoid Running out of Hay.
  4. Highways—Lightning Rods—Osier for Bands—Tape Line in the Cornfield.
  5. Forest Leaves for Litter—Good Smoke House—Corn Marker—Scalding Tub—Harvesting Peas.
  6. Chain Pumps—Irrigation—Draining—Clean Land.

VI. FRUITS AND FRUIT CULTURE—FOURTEEN ENGRAVINGS.
  1. Autumn and Spring Transplanting.
  2. Dwarf Apples.
  3. Rules for Tree Planters.
  4. Systematic Formation of Pyramids.
  5. Two Native Plums.
  6. Sending Buds by Mail.
  7. Shortening in the Peach.
  8. Construction of a Cheap Grapery.
  9. Gooseberries.
  10. Time for Pruning Orchards.
  11. Fruit versus Malaria.
  12. Dwarf Cherries.
  13. Strawberries—Quick Returns.
  14. Pruning the Quince.
  15. Select Lists of Apples.
  16. Labels for Fruit Trees.
  17. Select List of Grapes.

VII. INSECTS BY DR. ASA FITCH—THIRTY-FOUR ENGRAVINGS.
  1. Definitions of Terms, &c.
  2. Descriptions of Orders.
  3. Insects which Injure Fruit Trees.
  4. Insects which Injure Grain Crops.
  5. Insects Injurious to Gardens.

*** To show how full and valuable an article this is, it may be mentioned that Six Insects injurious to Fruit; Thirteen Injurious to Grain, and Six injurious to Gardens, are described with complete and new Illustrations, engraved expressly for this article in the ANNUAL REGISTER. It forms, in point of fact, the readiest HAND BOOK OF ENTOMOLOGY for the practical use of the farmer and gardener, we have ever seen.

VIII. NOTES ON NEW AND DESIRABLE FLOWERS—TEN ENGRAVINGS.
  1. Double Zinnia.
  2. Japan Pinks.
  3. Bidens Atrosanguinea.
  4. Cuphea Limapani—The Striped French Marigold.
  5. Dwarf Nasturtium—New Sweet Williams.
  6. Dwarf Convolvulus—Oenothera Camarkiana—Splendid Gazania.
  7. Lychnis Haageana—Whittavia Grandiflora.
  8. Caileopsis Cardaminifolia—The Gaillardias.

*** This article was written for the ANNUAL REGISTER, with Drawings and Engravings expressly prepared to accompany it, and not before published in this country, by JAMES VICK, Esq., of Rochester.

IX. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

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FOR 1863.

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THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. X. ALBANY, N. Y., NOVEMBER, 1862. No. 11.

PUBLISHED BY LUTHER TUCKER & SON

EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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The Cultivator & Country Gentleman.

AGRICULTURAL DISCUSSIONS

AT THE STATE FAIR AT ROCHESTER—FIRST EVENING.

Insects---Grain Aphis, Wheat Midge, &c.

Dr. ASA FITCH opened the discussion by a short lecture on the grain aphis. He stated that it had existed in Europe from time immemorial—it was described by Fabricius 81 years ago—but most of the early accounts were quite imperfect. Its existence between harvests, and its hiding place at that interval, was entirely unknown until traced out within two years in this country. Dr. F. then gave an account of its successive ravages. This year it has moved westward—it has measurably disappeared at the east. It has no doubt existed here for many years, but in small numbers and thinly scattered. Although Aphides are known to multiply rapidly, yet we have no instance of such rapid multiplication known, as has been exhibited by the grain aphis in the past and present year. This insect resembles the cabbage lice in its general character—sucks juices from the wheat plant, and thus abstracts nutriment from the crop. It needs no wings except to pass from one field to another, and we accordingly find these furnished it only late in autumn when about to migrate. A curious change takes place in these insects in summer—when they feed early in the season on the green blades, their color is of a grass green; but as soon as they begin to partake of the finer and richer food of the kernels, their hue changes to a fine rich yellow; and the parent insect has been known to bring forth brood exhibiting this change within the space of two or three days. Dr. F. in describing its habits, showed the fallacy of the occasional notion that small insects could be of spontaneous production—and mentioned the curious fact that aphides generally lay eggs at one time of the year, and bring forth young at another. In the early part of the year, the female brings forth perfect insects only, and without access to the male; and at this time all are females. Towards winter, males are produced and eggs laid, which remain through winter. This is the usual course with aphides generally. But the grain aphis is an exception to this remarkable rule. Dr. F. has found that this insect produces young, and not eggs, the whole year through; they are left to freeze on the wheat stalks as winter approaches, and thaw into life again the next spring. And as other aphides need no males to enable them to produce young, (whose eggs are not laid,) he does not know but the grain aphis may thus go on and produce the young female perpetually. This point needs further investigation. These insects produce four young at a time, and will nearly double their progeny in a single day—and thus increasing, a single female will have two million descendants in twenty days if all survive—a sufficient explanation of the enormous increase at harvest time. Several insects, the natural enemies of this aphis, were next mentioned, which serve to reduce its vast numbers.

In answer to an inquiry of GEO. GEDDES, Dr. F. described the lady-bug, one of these natural enemies, and stated that it never committed any injury to crops.* There are many species of this lady-bug, or Coccinella. G. Geddes said he had a crop covered with the aphis the past season, and they all suddenly disappeared, when on examination the crop was found covered with lady-bugs. T. C. PETERS inquired if Dr. F. thought the aphis likely to prove a permanent evil; he replied he thought not, that it would probably only occasionally, and during unusual years, get the better of these other insects which destroy it.

Dr. F. also gave it as his opinion, in reply to a further question, that the wheat midge will be likely to prove a formidable foe to the farmer, whenever the weather may be favorable to its increase. In dry seasons, and in dry localities, the fly cannot lay its eggs so abundantly; but on wet places and in wet seasons its destructive effects may be expected. He also stated that in order to prevent the depredations of the midge, Hessian fly, and other similar insects, it is necessary to give the crops a fertile soil, so as to make a strong growth—while on a poor crop it will not withstand their assaults.

G. GEDDES said he had been accustomed to take what Dr. FITCH said as a truth; but he could not help thinking he was mistaken in this matter of the midge. In 1846 the midge was exceedingly destructive—he totally lost 70 acres that promised an abundant harvest. Now, for five years, he has had good crops—the midge has done him no material harm, notwithstanding the varying seasons in these later years. He admitted that he now gave better cultivation, and farmed better, than then. He now raises Soule wheat, without seeing a midge in it; last year had 16 acres, and none was discovered; but he has nearly given it up, because the Mediterranean is so much more productive that it pays better, even at a reduced price. T. C. **Peters** thought Dr. **Fitch** correct, so far as practice exists among farmers generally—he thought that the general practice of raising the Mediterranean was the reason that the midge had diminished.

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* He thinks however that swine have been injured when they have eaten these lady-bugs in excess—as the latter are covered with an acrid substance, as a defence.

An experienced flour manufacturer (**Kempshall** of Rochester,) said that the "white wheat" had evidently much degenerated of late years, [as it may by successive growth from *seed*,] and the only way to restore it, in his opinion, is to change the seed. He had almost given up the idea of ever getting good white wheat again. He found Mediterranean wheat to improve every year; it "bleaches out"—and at the present time, he would rather have the flour of Mediterranean than of white wheat. One sort had improved, while the other had deteriorated.

Prof. **Dewey** expressed his grateful thanks for the exceedingly interesting lecture of Dr. **Fitch**, containing as it does, satisfactory indications of great labor and patient research, and conferring a lasting and great benefit upon the country at large, for the facts it has developed.

It was stated by several present that early sown and early ripening wheat was more likely to escape the midge; while some remarked that this rule should be reversed for spring wheat, which should be sown late.

G. **Geddes** wished to put a question to Dr. **Fitch**—Why, if the midge increased at first, it did not *continue* to increase—instead of going away as it now evidently is doing? Dr. **Fitch** did not admit that it was passing away, but thought that during some seasons it was more abundant and destructive than others—he had known it in former seasons to nearly pass away apparently, not really, but afterwards to return from its lurking places in destructive force, and he feared this would be the case in the instance referred to in the question.

G. **Geddes** alluded to the fact that *early* wheat was more apt to escape its ravages, and that this was a prominent reason that the Mediterranean wheat escaped. A farmer from Seneca county, differed from the expressed opinion of some others, as to the value of white wheat—many in that county were returning to its culture, and were successful—they were decidedly of the opinion that the midge there was passing away.

T. **Kempshall** of Monroe Co., stated that the "Genesee Flour" had deteriorated in character, and the fact could not be disguised—his own experience as a flour manufacturer, had taught him this at his cost—the white wheat of which it was made, had "run out,"—lost its quality. G. **Geddes** asked why millers were willing to pay a shilling more per bushel for white wheat, if it was not so good?

T. **Kempshall** replied that many millers would not—others thought it would yield rather more flour—while others wanted it to whiten up such as was dark colored. L. F. **Allen** had found that at Buffalo the white wheat was always the highest priced—the Kentucky white wheat sells there for $1.30 per bushel—Ohio white wheat a little less—red wheat 10 to 15 cts. lower—spring wheat still less. Bakers will pay a dollar more per barrel for white wheat flour, because it will absorb more water, and make more bread than any other flour. He corroborated the statement of others, that late sown spring wheat was more likely to escape the midge. He said that depredators were singularly influenced by causes that controlled their increase—a few years ago they were overrun by field mice—"you could hardly turn over a chip, but what there would be a mouse under it." The next year they were all gone. He thought many of these things "beyond our ken." Still he thought the introduction of new varieties might be useful.

Second Evening---Draining.

After A. B. **Conger**, chairman of the meetings, had offered a series of propositions, embodying the substance of last evening's discussions, **George Geddes** opened the discussion for this evening on *underdraining*. He said his principal object was not to impart instruction, but to bring out information from others. He alluded to the physical condition of the locality of Rochester—the condensation of moisture from the lake at this place, in producing frequent showers, as shown by meteorological tables. At Lewiston, out of the prevailing range of winds from the water, much less is found to fall. The water that falls is carried off from the ground by streams, and by evaporation from the clouds—and thus a perpetual round is going on. About three-fourths of this water is found to pass off by evaporation; nearly one-fourth by streams; leaving a small portion to disappear in some unknown way. Perfectly dry earth, will receive and hold seven inches of water to every foot in depth, without its running off. If a soil should be plowed three feet deep, it would hold 21 inches like a sponge. This is the reason that trenched soils hold so much without becoming overcharged, or becoming soon dry. A well pulverized soil is one quarter interstices or air, if the soil is dry; but these will be filled with water, if the soil is wet. In the best condition for growth of plants, these interstices hold air, and the particles of earth themselves are filled with moisture. An excess of water has been found to reduce the temperature 6½ degrees in summer—or equal to an elevation of two thousand feet or five degrees of latitude. The speaker then added, "now, gentlemen, if you wish to carry the soil of Rochester five degrees further South, you must underdrain thoroughly." To ascertain if soils need underdraining, observe if water stands in post holes; or if frost is most destructive in low places. The importance and advantages of underdraining were then pointed out by some striking examples—one case had just come to hand, where a landowner obtained 3½ tons of hay per acre, where before he could not obtain more than one ton. The speaker then went on to describe the different modes of laying drains, and showed the importance of doing the work right. He himself had *cut many ditches without draining his land*, not then understanding the stratification of the subsoil. In order to understand the work well, he recommended farmers to study the works which had been written upon the subject.

T. C. **Peters** of Genesee Co., said that if draining were carried out judiciously and thoroughly, it would alone increase the products of the State one third—that there is but little land in the State that may not be greatly benefitted by underdraining. In extensive regions it makes the difference of at least one hundred per cent. The coarse or aquatic grasses indicate the want of drainage; and to remove this water, and bring the temperature, as had just been stated, down to a level 2,000 feet lower, the advantages could be hardly estimated. He thought one of the best things the State Agricultural Society could do was to encourage the general adoption of underdrainage—to make it an important object for its labors for several years to come.

H. T. E. Foster of Seneca county, said that John Johnston had cut his drains about 2½ feet deep, and 2 rods apart. Both he and Robt. J. Swan had found it of great importance, wheat crops having increased to 40 bushels per acre. He commended the practice of farmers drawing a distinct and accurate map of all their drains, that they might in future know precisely where to tap them. He said J. Johnston preferred drawing tile several miles to making stone drains with stone at hand. In reply to a question, he said that without draining manure was nearly thrown away, which was one reason that good crops could not be obtained without this practice.

Solon Robinson requested T. C. Peters to point out the kinds of soil most benefitted by underdraining. The latter said that, with the exception of Long Island, there was hardly a locality in the State that did not require it. He gave the rule already mentioned, of digging trial holes, in order to observe when the water would stand, and where in such cases underdraining is always needed.

G. Geddes mentioned the case of a distinguished farmer of Westchester county, (Samuel Faile,) who had gone among the old farmers in that county and very thoroughly tile drained a large farm, that before was not really worth anything for cultivating, that now had really astonished the old farmers there, and was actually worth $200 per acre.

H. T. Brooks of Wyoming, expressed his surprise that no qualification was made for the different circumstances of farmers. In Wyoming county, the place of his residence, it would not pay, and he would give one thousand dollars to any one who would find a farmer that would buy a drained farm at its increased cost. A reply was made by a gentleman present, who had laid some 15 miles of tile within a few years, who said that it cost about $30 per acre to do it, and that the cost was always paid for within three years by the increased crops. He thought that if soil was tenacious enough to hold manure well, it would always need draining. He said that farmers might adopt poor husbandry, even on drained land, but that good farmers would find the operation in most instances absolutely essential to success. He recommended poor cultivators, who thought draining too expensive, to sell a portion of their lands, and drain and give good cultivation to the rest.

G. Geddes asked if there was any one present who had practiced underdraining, that had lost money by it—if so, he would please to speak, now, on this occasion? No one answered.

—— Baker of Steuben county, being called upon by H. T. Brooks, said that his land was very similar to that of Mr. Brooks, but that his experiments in underdraining had led him to very different conclusions—he had underdrained land that was worth about thirty dollars per acre, and increased its real value to over one hundred dollars per acre—in some instances to one hundred and fifty dollars per acre. This land he uses for raising sheep and grass. The audience now became somewhat excited, when Solon Robinson inquired "if this Mr. Baker was really the Mr. Baker that Mr. Brooks intended to call up in his favor?" when the latter admitted that he was—but he thought that for *hill* land draining would not be profitable. T. C. Peters thought that the object of his friend, Mr. Brooks, was to call out discussion—and he described the many localities, even on hill land, where the wetness of the soil had caused the growth of coarse wet grasses, and where the operation would double or triple the value of the soil. He admitted, as he had done before, that there might be much land that did not need it. But he did not think there was a farm of a hundred acres in the whole of Alleghany county, some portions of which, at least, would not be benefitted by draining.

Third Evening---Fences, &c.

A. B. Conger, chairman, briefly summed up the leading points reached by last evening's discussion on underdraining, the substance of which was given in our report of that discussion. The subject for the present evening was

Fences and Cattle Law of New-York.

T. C. Peters opened the discussion. He had obtained the statistics he was about to present, during four years extensive travel throughout the state. He alluded to the great importance of providing fencing for the future—old fences were decaying, and new ones would be needed, and we should have to adopt more nearly the practice of European countries. He assumed a mile of highway to each square mile of land—which is probably far within bounds. There are 28 million acres of land—of this about 16 millions are improved and 10 millions unimproved—the remaining 2 millions probably is villages, &c., according to several authorities cited. According to his estimate there were about 28,000 miles of highway in the state, or 56,000 miles of road fence. The cost of road fence he placed at a dollar a rod—the capital required to keep up the fence, another dollar at interest. The total annual cost of keeping up road fences, is over two million dollars, or nearly one half the entire state tax.

The average size of farms over the whole state is estimated carefully at 100 acres each—these fenced in 10 acre lots, require 800 rods of fence on each farm—besides the cost of the waste land. The whole cost of all fences in the state, he figured at $144,000,000. The annual interest on the fences on each farm is $56—or $28,000,000 are to be charged to the farmers of this state to keep up the fences annually. Yet all the taxes paid by by *farmers* is only 33 cents per acre,—the cities paying a large portion—yet the annual tax that fences occasion is *one dollar and twelve and a half cents per acre!*

A member present stated that he had made a careful estimate of the roads of the state from Smith's large new map, which gives every public highway, accurately laid down, and he made the amount about twice as great, or 60,000 miles, requiring 120,000 miles of highway fence.

The chairman (A. B. Conger,) in reply to an inquiry, said that the public had only the *right of way* on the land owned by private individuals—who really *owned* the land thus occupied. He then explained the present road law for the exclusion of cattle from the highway.

L. F. Allen thought that while in some districts, where there are substantial God-fearing farmers, this law might by some mutual agreement be carried out; yet throughout most of the state he believed it would be as much of a dead letter as the law against travelling on the Sabbath—and he mentioned some instances where "irresponsible vagabonds" had annoyed their better neighbors by taking advantage of this law; and the latter feared the threats of these vagabonds, should they enforce the law. He regards the present necessity of farmers to fence against intruders, as a most formidable evil, but he hardly knew how to furnish a remedy.

Dr. Thompson of Aurora, described the efforts of his neighbors in procuring the enactment of a special law, to exclude cattle from the streets of his village, which, with the determination of a number of land-owners, they had carried out and entirely excluded cattle and other animals. Their highways had become smooth grass plots, and now after the lapse of several years, it had become unnecessary to use gates,—and many of them had been removed from their hinges. So well pleased had the neighboring farmers become with these results, that the past winter they had asked for a similar town law, and this had led to the enactment of the state law now in force—they had in fact received in this way much more than they asked for.

Solon Robinson said a correspondent had proposed an amendment of that law, by which it should become the duty of the pathmaster to enforce the law and exclude the cattle, as a part of his duty in keeping the road in order. L. F. Allen replied by asking, "who made the pathmaster? Is it not the very men who, owning little or no land themselves, claim the privilege of breaking that law, by turning their unruly animals into it—would pathmasters thus manufactured be likely to enforce it?"

T. C. Peters said he thought the law much more generally enforced than Mr. Allen was aware of. He cited instances where years ago men had raised a cow and a horse, &c., in the road. They were cured of this practice by his leaving his road fences low on purpose, and then notifying them that the law would be rigidly enforced if the cattle intruded in the fields. The result, after some litigation, was successful; and as he was willing that they should procure the feed if they would take care of the cattle, they had as a consequence become scrupulously careful of his interests, by asking the privilege to keep his fences up for the sake of the feed. Under the *new* law he had succeeded in having it carried out, by promptness and energy, and by fearlessness of any threats. It was only in those neighborhoods where the inhabitants lacked back-bone that the law was trodden underfoot—where these owners of depredators perceived that their threats produced an effect. He thought it ought to be made the duty of pathmasters to enforce the law, and a fine be annexed to its neglect, so that they would have a sufficient excuse for doing their duty. He stated, in answer to a question, that there was no law to compel farmers to fence the highway.

Judge Warner stated a serious defect in the present law, in not providing for the payment of damages which cattle might commit in breaking into fields or enclosures. The officer should have power to assess damages on the sale of the cattle.

A member (name not heard) thought the law would never be enforced until street fences were removed, and he thought, perhaps, the Society should take some action with this view. Another member expressed his surprise that the gentleman from Erie, (L. F. Allen,) "who was six feet four or five inches high," should have any fear, as he expressed, of the threats of any one. D. M. Clark of Alleghany, said there were many in his county that had formerly been in the practice of street pasturing—one who owned 20 head, who had turned them into the road and hired out his pasture, had been induced to conform to the requisitions of the new law, and it has generally been carried out.

E. Cornell, President of the Society, stated some of his observations when in Europe. He had gone abroad favorably impressed with *live fences*, but had returned with a different opinion—he regarded them as a very expensive fence, although they might be the best that could be introduced on the western prairies. In travelling through France, no fences were to be seen—cattle were sometimes observed feeding tied by a halter, but generally they were kept up. In France there were not enough fences to suit our wants; in England they had too much. In England premiums had been offered for the most successful eradication of hedges. The President had concluded that he had too much fencing on his own farm—he intended to reduce it one-half, and make his fields larger. In England the hedge evidently destroys the value of the land for several feet on each side, by the exhaustion of the roots, and the necessary trimming is expensive. He is satisfied that in this State we have a great deal more fence than is necessary, but he would recommend a gradual reduction in this respect.

T. C. Peters moved that the Society approve of the present road law—that it meets the view of the State Agricultural Society—and that it recommend and urge its enforcement. Carried nearly unanimously.

Col. Johnson, Secretary of the Society, was requested to state some of his observations in Europe, more particularly in relation to the great exhibition of the World's Fair. He said that notwithstanding the refusal of the American Government to appropriate any thing for facilitating the exhibition of American productions, every courtesy was accorded to American exhibitors that could be asked. When the juries, which were composed of the most intelligent men of all nations, declared the awards, all were astonished that out of only 95 American exhibitors, 83 received premiums! No other nation received any thing like this. As a proof of the immense extent of that exhibition, he stated that 26 acres—9 acres more than the great Exhibition of 1851—were densely filled with the choicest productions and objects. This exhibition showed a remarkable progress in ten years. Throughout nearly every part of it, indications were distinctly visible that American inventions, as shown in 1851, had been extensively diffused, modified, and adopted there. He mentioned a number of exceedingly interesting instances to show this result, and showed conclusively the most important results that would have been derived from a little governmental aid. Col. J. said that he was astonished to perceive the wonderful advancement in English agriculture within the last ten years—and it now indicated a high degree of perfection.

THE NEW-YORK STATE AG. SOCIETY.

Exhibition at Rochester, Sept. 28–Oct. 3.

Floral Hall and the Fruits.

It appeared to be universally conceded that no previous fair had ever shown so rich and varied a display nor so extensive a collection of Fruits as occupied three or four hundred feet of the wide tables that lined the interior of the spacious tent devoted to them. The number of amateur collections was very numerous, and a large share of them were of great merit. The "professional list' was not less so; the aim of the exhibitors was evidently not to throw together everything they raised, good and bad, but to exhibit only valuable sorts, grown in the best manner. Ellwanger & Barry's collections, eclipsed of course, all others; but some of the rest were worthy of all praise. Among the principal exhibitors of general collections were J. M. Mattison, of Jacksonville, Tompkins county; W. B. Smith, Syracuse; and J. Donnelan & Son, W. King, Frost & Co., and C. J. Ryan, near Rochester. The collections of native grapes far exceeded anything previously shown; to these, large contributions were made by C. L. Hoag of Lockport; Hooker & Co., Seely & Co., Frost & Co., and Ellwanger & Barry of Rochester; and an especially fine collection of thirty sorts, some of great excellence and variety, by the Pleasant Valley Wine Company, Hammondsport, Steuben county. Fine specimens of the Adirondac grape were shown by J. W. Bailey of Plattsburgh, Clinton county. This new sort, which he thinks a seedling of the Isabella, possesses a good deal of the appearance and characteristics of its reputed parent, is nearly or quite free from pulp, and of a very agreeable and pleasant flavor. The bunches were good and handsome. Most persons would prefer it to the Isabella, although the latter when *fully ripe*, which is very rarely the case, is hard to excel. Some fruit raisers objected slightly to the Adirondac for being "watery," and not quite so marked in its flavor as would be desirable; but if as early as is claimed for it, namely, a month before the Isabella, it cannot fail to become a favorite.

The Floral department of this hall was admirably arranged—as was expected from the master hand of James Vick the Superintendent. The costly artificial temples of verdure seen on former occasions, gave place to the simple and refreshing arrangement of a natural garden. The leading features of this arrangement have been already mentioned in a former number of this journal, and we wish only to commend particularly on this occasion, the entire keeping in the union of moss-covered evergreen-lined tables for both fruits and flowers, rustic railing for bordering the alleys for spectators, and the fine apparently natural beds of large house-plants which were interspersed on the large grass plot in the central portion of the tent. The mode of constructing these beds was to place the plants together in close contact over the surface of the bed; line its exterior with curiously worn irregular stones of equal size, and entirely obscure the pots by a carpet of evergreen boughs.

About one quarter of the whole circle of flower tables was covered with a brilliant profusion from the untiring Mrs. Van Namee of Rensselaer Co., who has for so many years contributed largely to the floral display at the State fairs. One of the finest floral ornaments in this collection was a beautiful and simple basket, trimmed with evergreens and filled with flowers, with a delicate wreath entwining its handle—a far more tasteful object than the elaborate structures, shields, stars and other forms, made up stiffly of flowers themselves. There were several other collections of flowers of nearly equal merit, besides extensive ones from Frost & Co. and Ellwanger & Barry.

The Domestic Hall.

This fine permanent building was well filled with a miscellaneous collection of ingenuity and skill. It contained some objects of especial interest. One of the most so was a model of Ogden's machine for manufacturing cement pipe for drains and water pipe. This machine is likely to prove one of much value. The tile is made under a high pressure, giving them a very compact texture, regular form and finished surface. As the process of burning is obviated, the pipe may be made more cheaply than by the usual mode of burning clay. It may be also used instead of lead pipe for the conveyance of water underground, and of course at far less expense than lead. The machines are expensive, costing a thousand dollars each, and one will make two thousand tile in a day. From the statement of the cost of manufacture, we infer that such pipes may be made for about two-thirds the expense of common earthen tile, while it is of better quality.

Standing beside this model was the admirable lime-light for locomotives, invented by Dr. G. H. Smith of Rochester. Common gas is used instead of hydrogen, and atmospheric air for oxygen—the orifices through which they pass being similar to those of a common compound blowpipe. The light emitted is about fifteen times as strong as that of the common locomotive lamp. The gas is compressed in a reservoir of four or five cubic feet capacity, and reduced in bulk about ten times with a pressure of some 200 pounds to the inch, and when once filled will continue running eight or nine hours.

Daniel Sager of Greenbush, exhibited the model of a wagon-brake, which appeared to possess great merit. It is so constructed that when the vehicle descends a hill the brake instantly becomes self-acting, but *not* in *backing* the wagon. A cast iron block presses the tire of the wheel, and lasts till it is literally worn out, when it is at once replaced by another. The whole contrivance is both ingenious and simple, and may be attached to a common wagon at a cost of $4 to $6.

Fish's patent nursery or night lamp, is a new invention, possessing much convenience. It is simply a lamp, burning gas or kerosene, and heating a small boiler. A three quart reservoir is boiled at a cost of one cent. The water may be kept hot, and boiled rapidly at short notice by turning up the flame. It must be a fine thing for a sick room.

The Mica Lamp Chimney Co. of Syracuse, exhibited their lamp chimneys, which possess the several advantages of not breaking if allowed to fall, not cracking by heat, remaining unsoiled by smoke, and being easily cleaned. They are certainly valuable.

S. B. Dewey, Jr., of Rochester, exhibited a collection of kerosene lamps; among them is a small night lamp, which we have tested for several weeks, and it is a perfect little contrivance of its kind—the flame being easily reduced to the size of a pin's head if needed, and readily regulated.

Hutchinson & Lyon of Cayuga, also had on exhibition an excellent contrivance for the perfect combination of kerosene in lamps—which even obviated the use of chimneys in some instances, and rendered simple the labor of trimming.

The rest of the contents of Domestic Hall exhibited industry, taste and ingenuity, but they do not need separate notices in a condensed report like this, and their variety may be understood by naming a few, such as furs, quilts, carpets, rugs, ottomans, sewing machines, penmanship, photographs, paintings, embroidery, clothes wringers, pianos, "native wines," preserved fruits, travelling bags and trunks, articles of dress, bedsteads, barometers, hats, models of bridges, hose, yarn, flannel, stocking-yarn, mittens, and Dewey's fine paintings of fruits and flowers for nurserymen and others.

The Dairy and Mechanics' Halls.

Dairy Hall was not well filled. A few large and apparently excellent cheeses from Oneida county were the whole representation under this head. One of them weighed over half a ton. Most of the newly used cheese vats were in the hall—including the Oneida, Roe's, and others. A number of newly patented churns were observed, but nearly all had the defect of too much complexity, while they did not appear to possess any decided advantage over simpler sorts. A similar objection, complexity, existed with some of the butter workers. The same hall contained a moderate exhibition of good vegetables—a good collection of grains and seeds, and several complex patent bee-hives. Another subdivision of the hall was occupied with a moderate collection of stoves and hot air furnaces, a number of water lifters, and a miscellaneous collection of mechanical contrivances, some of considerable interest and value. A simple, ten dollar root cutter, made by J. R. Robertson, Syracuse, appeared to be one of the best we have seen. A superb collection of cutlery was exhibited by D. R. Barton & Co. of Rochester. A new grain cradle, possessing some conveniences for adjusting and regulation, in connection with durability, came from Remingtons, Markham & Co. of Ilion. D. W. Seely of Albany, exhibited a good brick machine. A neat, compact and strong willow peeler was furnished by Easterbrooks of Geneva. Wm. Lines of Rochester had a compact and convenient coal sifter. Well made steam engines were contributed by D. A. Woodbury & Co., Rochester. Eames' Water Engine, of which some of our readers will remember a remarkable account in last year's Country Gentleman, was also on exhibition. It possesses the power of elevating a stream of water to a height many times greater than the head which elevates it, by the simple reciprocating motion of a piston—and while it is extremely simple, it operates somewhat as a steam engine, only the head of water works it, in the same way that the head of steam drives in the steam engine. It is not unlike the water ram in its results, but operates with little or no waste of water. Without seeing it in actual operation we were disposed to think very favorably of it, and that it promises to be extremely valuable.

The Live Stock.

CATTLE.—The collection was moderate, but embraced some excellent animals. There were no extensive herds of *Short-Horns* on the ground. Among the exhibitors were Geo. Miller of Markham, C. W.; James O. Sheldon of Geneva; E. Griffin of Duchess county; A. B. Conger of Haverstraw; Dr. George Phillips of Ogdensburgh, who had many good animals; A. Stevens of Batavia; and C. K. Ward of Le Roy. The principal exhibitors of *Devons*, were Joseph Hilton of New Scotland; A. Stevens of Batavia; and A. B. Conger of Haverstraw. S. D. Hungerford, Brodie, Campbell & Co., and J. F. Converse, all had very fine *Ayrshires*. Erastus Corning, Jr., of Albany, as usual, nearly swept the board with his excellent *Herefords*—if we mistake not, he carried off all the premiums but one, which was awarded to John Hovey of Broome county.

One of the most interesting exhibitions on the grounds, was that of the skill of a young man by the name of Williams, from Jefferson Co., who without yoke, or any kind of harness or lines, preserved complete control of six young steers, driving them and working them through all kinds of evolutions, and almost literally doubling and twisting them, with scarcely ever speaking a word, and almost wholly by gentle signs of the whip or hand. Such perfect discipline and control, with never a loud word, furnished a strong contrast with the noisy vociferation with which some farmers think it necessary to drive oxen, accompanied by repeated blows of the whip.

The show of SHEEP was unusually fine and very extensive. The ranges of pens extended for about a quarter of a mile. Among the *Spanish Merinos*, were 35 fine animals from George Campbell of Vermont, which were not excelled by any in this class; the largest ram had sheared 20 lbs. one years' growth, last season, and 21½ lbs. this year. Pitts & Wiley of Honeoye, 52 head of the full blood Spanish, excellent animals. S. Hillman of Avon, 10 handsome rams of the Atwood Merinos. Wm. Chamberlain about sixty head of Spanish Merinos, over 40 of which were full blood,—in the hands of his excellent manager Carl Heyne. Among other exhibitors, we observed the names of Carl Heyne himself, W. L. Chamberlain, E. G. Cook, N. M. Dart, John Pierce, John Brown, E. N. Bissell, and others. A pair of large and fine Leicesters were exhibited by James Lawrie, Scarborough, C. W. Amos F. Wood, Jefferson Co., Jurian Winne of Albany Co., and Geo. Miller, C. W., several fine animals of the same breed. Brodie, Campbell & Co. had a large and excellent herd on the grounds. John Snell, Brampton, C. W., had 18 Cotswolds and 4 Leicesters; the two-year animals weighing about 320 lbs., and shearing 15 lbs.; the yearlings weigh about 270 lbs. James F. Converse and E. Gazley were prominent among the large exhibitors of excellent Cotswolds; and there were good ones from Cooper Sayre of Ontario Co. A half-dozen large and fat ones, bred by F. W. Stone of Guelph, C. W., and fattened and exhibited by W. M. Smith of Detroit, were stated to weigh 400 lbs. each.

Charles B. Meek of Canandaigua, had some excellent specimens of his Hampshire and Shropshire Downs. Geo. Betteridge of Riga, showed some good Cotswolds. Among the South-Downs, nothing of course could excel the splendid animals of Samuel Thorne; while some animals of great excellence were also shown by James O. Sheldon of Geneva, P. Lorillard of Fordham, A. B. Conger of Haverstraw, &c. Very fine Shropshire Downs were exhibited by J. Lorillard, and Hampshire Downs by A. T. Parsons. Among the exhibitors of Leicesters were C. B. Eastman of Jefferson county, and others.

SWINE.—There were many fine animals, but the exhibition was not quite equal to the extensive one last year at Watertown. Among the exhibitors of Yorkshires and kindred breeds, were Robert Ball, T. O. Jones, Brodie, Campbell & Co., A. C. Clark, and others. E. S. Hayward showed a fine herd with some mixed blood. James F. Converse an extensive herd of thorough bred Yorkshires. A large and fine Essex boar was brought by R. B. & A. A. Underhill of Duchess Co. T. T. Cavanagh exhibited a huge animal of the Yorkshire class, that was stated to weigh full *half a ton*.

POULTRY.—The exhibition of poultry was a fine one—two hundred feet in length were densely packed with cages of handsome and selected breeds. Among the prominent contributors were Heffron & Best and E. N. Bissell, who had many animals—and Lewis F. Allen, J. R. Page, D. P. Newell, E. P. Cheever, P. S. Clute, G. Westfall, W. King, and E. A. Wendell of Albany, all of whom had valuable contributions.

Implements and Machines.

The collection of these was extensive and valuable, and as was to be expected, was especially so in Mowers and Reapers, and in Horse-powers and Thrashing Machines—characteristics of the great grain-raising region in which the fair was held. In viewing the long lines of these machines, extending across the grounds, they suggested the immense importance at present attached to inventions of this character, furnishing, as they do, the only means by which the million farmers of the northern states can now carry on successfully the cultivation of grain, while so many laborers have passed from the plow to the battle-field.

The following list of exhibitors of horse-powers and thrashing machines, many of whom had several machines each, will show the extent and value of this part of the exhibition:—Emery Brothers, and Wheeler, Melick & Co., Albany; R. & M. Harder, Cobleskill; G. Westinghouse & Co., Schenectady; Birdsall & Brokaw, West Henrietta; Dow & Fowler, Fowlerville; J. M. Harvey & Son, Amsterdam; Lawrence & Gould, Troy; Hildreth & Co., Lockport; Perigo, Avery & Gould, Groton, and Fisher, Weiland & Co., Buffalo. Most or all of these machines indicated great excellence.

Among other machines on the ground, were Emery's cross-cut saw, La Tourette's tile machine, which screens the clay and makes the tile at one operation, and which was kept at work on the ground; valuable sectional cast rollers and clod-crushers, from Burrall of Geneva; a vibrating or dirt-shaking potato digger, which may prove valuable, from Wm. B. Ryan of East Pembroke; a fine collection of steel plows and cultivators from Remingtons, Markham & Co., Ilion; another collection of good and durable iron-frame harrows and cultivators, from J. Fink of Baldwinsville; and another collection from Whiteside, Bennett & Co. of Brockport.

The large collection of Mowers and Reapers will be noticed next week; but the newly invented Self-Raker attached to Kirby's Reaper, should not be overlooked. This contrivance is a very simple one, is moved by gearing, and appeared by an imperfect trial with straw, to do its work in a very complete manner.

There was a very good number of grain drills on the ground, and at first sight it would seem rather difficult to determine which one was really the best. Bickford & Hoffman, Macedon, N. Y., and P. Seymour, East Bloomfield, N. Y., exhibited each a combined drill, broadcast grain sower, seed sower attachment, and an attachment for sowing plaster, ashes, guano, or any other fertilizer at the same time. Mr. M. Downey, Springfield, Clarke Co., O., exhibited a combined grain drill, which, by the way, took the first and only premium, of a silver medal, which possessed many features which recommend it highly to every farmer who wants a good drill. The judges on this class of farm implements, who were all practical farmers, were guided by the *price* of the implement, its *simplicity*, its *durability* and its *convenience*. This last one would admit of the tubes being in a line or in a zig-zag position; the grass seed attachment was *behind* the tubes, which left the grass seed to be covered by the rain; the grain tubes were India rubber, instead of iron or zinc, which is quite preferable; and the *price* was nearly one-third less than the other drills. And, more than this, there was a land measurer attached to this drill, by which the teamster could see at a glance exactly how much ground he had passed over, and how much grain and grass seed also he is sowing per acre.

Ira S. Stanbrough, Newark, exhibited a hand seeding machine, with plaster sower attached, which is a genuine machine, and costs but littte. We saw it in operation, and it sowed cloverseed very evenly, and much faster and better than could be sown by hand. The plaster attachment, in our opinion, is superior to anything else that was exhibited in that line, considering the *price* of it and convenience.

J. Nourse & Co., Boston, Mass., exhibited a universal plow, with iron beam, having several different patterns of mold-boards, for different kinds of work, which appeared to possess quite as much merit as any other cast-iron plow on the ground.

Of horse hoes there were but two implements entered. Of these Milton Alden's horse hoe, or thill cultivator, took the first prize, $8. There was, besides, a large variety of one-horse and two-horse cultivators, which were most excellent implements, well made, and of good style.

Mr. J. Fink, Baldwinsville, N. Y., exhibited a Union Climax Cultivator, which is a most superior implement, especially for working among potatoes, and for digging them. In the line of Potato Diggers, where farmers do not raise but one-fourth or half an acre, this will subserve an excellent purpose, as the small iron harrow, which is attached to the implement, will bring out every potato to the surface of the ground.

There was a good assortment of harrows on the ground, and one combined revolving harrow, which discloses a new and valuable principle, and which we have seen in operation, and know to be a valuable implement, took the first premium.

Intimately connected with harrows was a revolving cast-iron clod crusher, which, no doubt, would operate well where lumps and clods are always sufficiently dry not to pack into the grooves, in which case it would be but little better than a plain land roller.

There has evidently been a vast amount of thought and money expended in endeavoring to get up implements that are different from anything now in use, and which never were, and never will be, of any practical utility to farmers. This was the case here at the fair. There were thousands of dollars worth of farm implements that were utterly worthless as real practical implements, and still the inventors flatter themselves that they have produced something that will astonish the world. Of such implements we do not propose to say anything, but to speak of those which possess true merit, that will stand the test in future years, and which will operate well whenever they may be put to the test.

[For the Country Gentleman and Cultivator.]

TURNIPS AFTER CORN AGAIN.

I notice an article in last week's COUNTRY GENTLEMAN entitled "Corn after Turnips," by your correspondent, Mr. BARTLETT, and as I have had some experience in the matter, which I certainly paid well for, you shall have it.

Some four years since I raised a noble crop—some 30 loads of Ruta Bagas, on a lot consisting of about $1\frac{1}{4}$ acres, which was a heavy clover sward turned under in June, and well top-dressed with fine compost. The next season I planted to corn, supposing, of course, to receive good returns, as the land had been so thoroughly fed the year previous. The result was, however, a total failure—there not being sufficient grain really to pay for harvesting. I have also known similar cases of failure in our locality since. The reason I am wholly unable to assign, as the land was certainly in good tilth, but infer the turnips must extract some ingredient from the soil which is all-important to the corn crop. Perhaps Prof. JOHNSON, or some other of our agricultural chemists, can tell us what it is. We only know the facts, without pretending to assign the cause.

Salisbury, Conn. W. J. PETTEE.

[For the Country Gentleman and Cultivator.]

SOWED CORN.

I became a farmer in April, 1859, and therefore as my experience in farming is brief, those who choose can skip over what I have to say. But experienced or not, I find I have succeeded in making farming, on $100 land, *pay;* and if I was asked to name the reason, I should unhesitatingly point to the production *of sowed corn.* My production of this crop this year will amount to about 15 acres, 10 of which I have just finished cutting, designed more particularly for late use; the balance has either been fed, or is yet standing to be fed before frost, if there is time enough before that event, or to be instantly cut down should that event be threatened.

I have before explained my method of raising sowed corn, but as I see so much poor stuff under this title about the country, I consider it my duty to repeat my system.

On the largest scale, I raise this crop on the Mohawk Flats. In June I turn over an old meadow, harrow thoroughly, and with the Albany drill, sow Western corn in the lap or *at* the lap of every other furrow. I cultivate once with Alden's thill cultivator, and that is all till harvest.

Now at the lowest estimate, I am reaping 25 to 30 tons of the best cow food in the world per acre, at the trifling outlay of

Plowing once per acre, say	$2 00
Harrowing per acre, say	1.00
Three bushels of seed	1.87
Sowing and once cultivating	1.50
Cutting and binding	3.00
Hauling to yard and stooking	2.00
Or per acre,	$11.37

That is to say, the fodder stacked up in my yard costs less than two dollars per ton, or less than one cent for ten pounds.

I have said nothing about manure, for I use none at all for the Flat's crop, and it leaves the land in a most excellent condition for the succeeding crop, which is oats or barley with grass seeds; for be it understood, sowed corn is *not an exhausting crop.* In the most perfect degree it comes up to the requirements I have seen discussed in the COUNTRY GENTLEMAN during the last year, of a fallow crop. It shades the land; it assists in decomposing the sod; it assists in destroying and smothering weeds by its luxuriant and late growth, and it requires that the weeds should be destroyed in the earlier stage of its growth. What more is required of a fallow crop?

Talk about roots! carrots, turnips, &c. I have heard of 1,000 bushels of the former—some twenty tons per acre; and of the latter, the Scotch farmers talk about eight or ten tons, and in rare instances as high as fifteen, but I venture to say that no person in the United States ever succeeded in raising over an acre or two of either at those rates. It is generally small patches that produce *at the rate* of 1,000 bushels of carrots per acre; the labor actually forbids extensive fields, even if cellar room did not.

But the objector says the root crop is worth the most. It ought to be, for it doubtless costs at least five times as much to produce one-half the quantity, or in other words, I can produce ten pounds of sowed corn as cheaply as I could one pound of any root crop, unless it may be potatoes of some of the new and hardy varieties.

Now let us see what the value of sowed corn really is. Let me first premise that I took the trouble to weigh a portion of my upland crop in August, and I found it to be 36 tons of the green fodder per acre, and not nearly fully grown at that, though probably quite as valuable as if mature. But as to the value. I feed and milk 66 to 68 cows. They are milked at 4 o'clock A. M. As soon as milked a bag of two bushels of "ships" is fed out to some of the more deserving of the herd. After breakfast, or about 7, they are turned out upon after-feed, and kept there about three hours. They fill themselves pretty well, though not sufficiently to lie down generally. At 10 they are turned into a lot where there is plenty of water, but no feed. At 12 they go into the stable, where the corn is already placed in their mangers, in quantity about 20 pounds per cow. At 2 they are again milked and turned out where they just get feed enough to keep them busy till 5 or 6, when they are again turned into the stable, where about 40 pounds per cow, of corn, has been placed in their mangers.

The reader can judge how large a proportion of their food is corn. I estimate two-thirds, though their pasture is good, but allow one half. Well then, 67 animals in 23 days days had consumed just 231 square rods of corn, or 10 rods per day for the whole herd, or the sixteenth of an acre per day for one-half the living of 67 cows; or one-eighth acre per day for their entire living; or some 4,200 pounds of the fodder, or 60 pounds per day per head for the half of it. Calculation shows that 108 rods should, at this rate support a cow in milk 365 days. Will any root crop in the universe beat this?

For upland an abundance of manure must be used, and besides the cultivatien, one hoeing and weeding is given. The distance apart of the rows the same, say 24 inches, and the stalks about 3 inches apart. If the reader will take the trouble to calculate, he will find that if the stalks averaged a pound each with these conditions, the yield should be 56 tons per acre, but they do not. A good stalk in the tassel will weigh a pound, as I have many times proved, but they will not average that.

For winter use, the corn is bound in bundles, and set up in the stack-yard in moderate sized stooks well bound, consisting of twelve bundles. From this yard it is taken as fed out, and I have fed as late as February 1st. It kept well till then.

Let me close my essay with an incident *appropos* to the subject. One day last June, when our hay crop looked unpromising enough, I met a distinguished politician of this State, whose reputation is national, and who is besides being a politician, a practical farmer—much the noblest calling of the two by the way,—"Mr. W.," said he, "what shall we do for hay next winter? Shall we sow Hungarian grass?"

The Governor, by the way, was one of the first to bring that humbug from Iowa into this county. I replied that I sowed Western corn, and was then about to sow ten acres of flats for winter use, besides my usual crop for summer. Acting upon my advice, he sowed some six or eight acres of his flats with corn. I met him the other day. He had harvested his crop, and remarked "what a splendid crop it is. Why is there not more of it produced?"

American Farmers, ask yourselves that question, and cease imitating English farmers. Adapt your farming to your climate. W. *Utica, Sept.*, 1862.

The Provincial Fair of Upper Canada.

We much regret that unavoidable circumstances prevented our attending the exhibition of the Provincial Ag. Society of Canada West, week before last at Toronto. From friends who were present we learn that it was well attended, the sales of admission tickets amounting in the whole to probably $12,000 or $13,000. In several departments—particularly perhaps, Short-Horned, Galloway and Angus Cattle, and the mutton breed of Sheep, the show is thought to have been a remarkably good one, and throughout it probably compares favorably with any ever held by the association.

Mr. HARRIS of the Genesee Farmer, who was present has kindly furnished us with a copy of the Catalogue of the Exhibition. This is a most important adjunct to the interest and usefulness of such a Show, and ever since we had the opportunity of learning its value at the Foreign exhibitions, we have been most desirous that our Society should also issue a Catalogue of its exhibitions. To do this, however, with any degree of completeness, it is absolutely essential that all *entries* should be made several weeks in advance; and it has been thought doubtful whether we should succeed in inducing or compelling our impatient people to take this anticipatory trouble. The Catalogue before us contains 100 pages, and 1814 entries numbered successively, and arranged in classes and divisions corresponding to those of the Premium List. Thus we ascertain that the number of entries was as follows:

Class		
	HORSES.	
1.	Blood,	24
2.	Agricultural,	91
3.	Road and Carriage	143
4.	Heavy Draught,	45
	CATTLE.	
5.	Short-Horns,	123
6.	Devons,	97
7.	Herefords,	27
8.	Ayrshires	74
9.	Galloway and Angus,	62
10.	for Special Prizes,	—
11.	Grades	52
12.	Fat and Working,	32
	SHEEP.	
13.	Leicesters,	226
14.	Cotswolds,	62
15.	Other Long Wooled,	87
16.	South-Downs,	87
17.	Cheviots,	19
18.	Other Medium Wooled,	45
19.	Merino and Saxon,	50
20.	Other Fine Wooled,	11
21.	Fat,	23
	PIGS.	
22.	Yorkshire,	33
23.	Large Berkshire,	16
24.	Other Large Breeds,	14
25.	Suffolks	36
26.	Improved Berkshire,	54
27.	Other Small Breeds,	37
28.	Poultry and Rabbits,	244
	Aggregate of the whole	1814

We give the above *in extenso* because it presents in tabular views both the classification of breeds adopted and the relative numbers in which they were represented. The Short-Horns, Herefords, Cotswolds and South-Downs shown by the President, FRED. WM. STONE, Esq., were among the finest in their several classes. Mr. JOHN SNELL, Col. DENISON, Messrs. JOHN and GEORGE MILLER, and DANIEL TYE, were among the large and prominent exhibitors. From the American side of the line were T. L. HARISON, Esq., and Messrs. BRODIE, CAMPBELL & Co.

For the Canada Company's prize for the best 25 bushels of winter wheat, there were 22 entries; for the best 2 bushels of white winter wheat, 40 entries; for the best 2 bushels red winter, 15 entries; for the best 2 bushels white spring, 22 entries; and for the best 2 bushels red spring, 39 entries. Our informant thought these samples of grain not equal to those exhibited on former occasions.

The Toronto Globe, in its very full report of the exhibition, says, "the show of agricultural implements, of fanning mills and of threshing machines, of straw cutters and root cutters, of cider presses and of cheese presses, of horse rakes and hand rakes, of scythes and snaiths, of steam engines, of harrows, of churns, of plows, is, we think, taken all together, better than we have ever seen before in this Province." The same paper, which is one of the most ably managed and influential of the Canadian journals, also notices the fact "that many of the articles shown are copies of others of American make," and adds the following pertinent remarks:—

> Our manufacturers and the people of this Province, who buy from the manufacturers, are much indebted to American suggestions, and we still think those who have the management of the Exhibition are guilty of a very narrow-minded policy in not opening the prizes for competition to our neighbors. The object in holding the exhibition at all, we suppose, is not to enable Canadian manufacturers to get premiums, but to create competition among them whereby improvements will be effected which will redound to the good of the Province as a whole. By encouraging American manufacturers to come here, many valuable hints would be obtained. To exclude them because they would take a good many prizes, is a sort of system by which we "cut off our nose to spite our face."

Lack of space compels us to close this imperfect notice by adding that we hope to have a considerable representation from Canada at our State Fair, both as visitors and exhibitors. Our departments are now all open to them, on the same terms as to our own citizens, and the community of interest between the farmers and breeders on the two sides of the border, is annually increasing and strengthening. L. H. T.

NEW IMPLEMENT FOR CULTIVATING.

A late number of the COUNTRY GENTLEMAN contained a brief notice of a new implement for planting and cultivating, invented by S. W. HALL of Elmira. It was exhibited at the State Fair at Rochester, but we understand through a mistake of the Committee, was not seen nor reported upon. We gave it some examination, and found it to comprise several points of merit. It is used for both planting and cultivating. Its leading object is to obviate the necessity of carefully guiding the horses in marking, planting and cultivating, by making a track in which they will accurately walk with but little attention. A single straight furrow having been made, two parallel pieces of timber or scantling, furnished with small wheels, and cultivator teeth, follow, marking two perfectly parallel straight furrows. The implement being drawn by two horses, a new furrow is made at each passing. Between these tracks, the seed is deposited—the rows of course being quite straight and parallel. The contrivances for dropping beans, corn, carrots, beets, and potatoes, are good ones, and show much ingenuity. After the crops have come up, they may be cultivated by the same machine, with great accuracy, the rows having no curves nor crooks, and admitting the teeth or knives to run very closely—thus saving much hand labor. For cultivating carrots and other small plants, while in an early stage of growth, a contrivance is attached that cuts very closely to the rows, at the same time that it protects the young plants from being covered by masses and clods of earth. and cleans the cultivator teeth when they become clogged, For digging potatoes, a set of hooks is placed in the implement, which move along through the centre of the row with none of the usual care required to keep a potato plow in the center; as, to use the inventor's phrase, "there is no dodging." This implement is rather complex, and costs about $60.

There are two leading objections to it, which we trust the inventor may obviate. The first is its complex structure and consequent cost. Possibly the frame-work may be greatly simplified. The other is its inability to work but one row at a time—although this objection is at least partly obviated by the extreme accuracy with which the planting is done, and the closeness with which the cultivating is done to the rows. Yet if a simpler and lighter form of frame could be devised, so that instead of forming two furrows only, four could be cut at once, with three intermediate planted rows or drills, the machine would work more rapidly by three times, and be more in accordance with the wants of American husbandry, which calls for horse labor, with as few attendants as practicable. Garrett's Horse-hoe, which is used on the clean, smooth, highly cultivated lands of England, cleans or cultivates eight rows of carrots at once, planted nearer together than farmers usually plant in this country; and every invention that will enable farmers here, where hand-labor is more expensive, and horse-labor cheaper, to sweep through their corn-fields and root crops, taking more than one row at a time, will meet their approval in this respect. Their successful use, presupposes, of course, good land in fine cultivation, and not grassy, stony, rooty, stumpy ground, rendered uneven by "cradle knolls."

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PATENT OFFICE REPORT.—Hon. D. P. HOLLOWAY, Commissioner of Patents, will please accept our thanks for copies of the Report on Agriculture for 1861. A copy of of the Report on Mechanics would be very acceptable.

SURFACE APPLICATION OF MANURE.

"At one of the meetings of the New-York State Ag. Society, 1860, Major DICKINSON is reported as saying: 'I hold that one load of manure on the surface is worth two loads plowed in.'"

This remark, made by me to a body of practical farmers of large experience, and of the very highest intelligence in their art, being received without discussion, it was not supposed at the time to be necessary to prove it—especially before so enlightened an audience. I certainly did not expect to be called on by a reader of the COUNTRY GENTLEMAN to defend so plain a proposition; much less by one who sets himself up as a teacher of agriculture. But so it is, and I beg the indulgence of agricultural readers for trespassing on their patience to prove the truth of my assertion, for the benefit of Mr. BARTLETT and a few new beginners.

Eight tons of manure, properly prepared and judiciously applied to the surface of an acre of poor, thin meadow soil, that would not produce more than half a ton of hay to the acre without it, will increase the yield of hay to one ton per acre. And if the grass is cut early,—that is, before the seed begins to form,—and the meadow is not pastured, the same application of manure three years afterward will increase the yield to one and a half tons per acre; and the same process repeated three years thereafter, will make it produce two tons to the acre. The roots and rootlets would be increased quite as much by the application as the growth above ground. Each application of this manure will add one hundred per cent. to the original growth. This large increase is on the most favorable soils; but to prevent its being an extreme case I will reduce the increase three fourths, so as to meet the most unfavorable soils that can be found; and even then, one load of manure thus applied is worth two loads plowed in, for at the end of ten years the sod will have so increased in thickness and in substance, as to contain more fertilizing material for plowing under, than is contained in forty-eight tons of such manure plowed in.

Now let us take a much stronger case:

Plow up the soil by the road-side of your meadow, where it is as nearly as possible like your meadow soil; draw and spread twenty-five loads of it on an acre of the meadow, and after an interval of two years, spread the same amount again, and you will thereby increase the quantity of hay from fifty to one hundred per cent., if the original yield was not more than three-fourths of a ton to the acre. Then take one other acre of such land, and spread one hundred loads of the same soil upon it, and plow it in, and if you derive ten per cent. advantage from the operation, you will have accomplished more than I could do.

Again, sow ten bushels of ashes on an acre of meadow producing less than a ton to the acre, and it will increase the yield from one-fourth to one-half of a ton. And that is not all; it will bring in and promote the growth of other grasses that did not before make their appearance, and add very much to the quantity of sod to be plowed in. Then take the same amount of ashes to the acre, and plow it in immediately after spreading, and you will find by comparison that one bushel for top-dressing is worth ten plowed in. With plaster the case is still stronger with this difference—that it does not increase the sod to the same extent. I must not be understood that the same soil is always best to top dress with. While I have invariably found it to answer an exceedingly good purpose, I have found that clay is much better than any muck with which I am acquainted. The preparation and application of these fertilizers, is simple, plain, and consistent with nature.

It is well while making manure in the yard to spread occasionally a load of plaster on it, at the rate of say one ton of plaster to fifty tons of manure. It is well also to feed occasionally through the winter some hay that has been cut after it has ripened, so as to have abundance of seed in the manure to supply any deficiency in the meadow. This ripened hay should be cut from meadows that have been made so rich that it will not deteriorate them so as to prevent their yielding a good crop thereafter. Manure prepared in this way through the winter is ready for use in the spring. The plaster not only holds all the ammonia with which it comes in contact in the yard, but has the power of accumulating more after being spread on the meadow or pasture. In hauling out the manure, a yoke of oxen is the best, because the cheapest. A yoke of oxen well fed, with a careful man to drive them, will fat almost as fast at this business as to lie idle; and they can therefore be increasing in value every day. The man that spreads it must have brains, as there will be some portions of the field that need more than others to make the meadow even. He should stand on the load while spreading, as he can see much better from that position where and how to spread the manure; and besides he can spread it faster in this way than when it is unloaded in piles about the field. I never permit a man to unload in piles for the purpose of making haste for dinner, rain or night. He may unhitch from his wagon to make haste for anything, but manure is too precious for top-dressing to be piled up in the field. No man can apply it to grass as it should be, after it is unloaded in piles, for the reason that all that is left in the pile must be spread, and if not sufficient, it must answer; and still worse, the fine which would be left in the bottom of the wagon is pulled off into the pile instead of being taken as it should be to some portion of the field where strawberries, moss, or some other pernicious things are trying to run the grass out, which latter course is as much preferable to harrowing and scarifying the meadow, as it would be to feed the proper food to stunted scurvy cattle whose hides have grown fast to their bones from starvation, instead of scarifying their hides to give them a start.

I never saw a skillful top-dresser whose meadows "run out," and I never saw a man, or one that had ever seen one of that class of farmers, whose sheep had "run out" or deteriorated in his hands.

Top-dressing sometimes can be applied to the cereals to great advantage, especially when the piece is seeded down. In the year 1859, the crop of oats was in many sections a failure, in others a short crop, by reason of the cold drying winds which followed the rains, which so crusted the soil over that the roots neither received sufficient air nor surface moisture. I then top-dressed 35 acres of oats, and 25 of spring wheat, with ten bushels of of ashes burnt from sods, and two bushels of salt, to the acre, which served, with the aid of the after rains, to feed the roots and stimulate the growth, so that the oats and wheat thus treated yielded twice as much as other oats and wheat which I raised that season on equally good and well prepared ground, without the top-dressing.

After the manure has been spread from the wagon, it should be spread over again after a rain. Eight tons to the acre are not sufficient to cover the whole surface, but the manure can be spread much more nicely when wet than when dry. There are two objections, however, to drawing when wet. One is, the manure is then much heavier to handle, and the other, which is by far the greatest, is that it cuts up and injures some soils almost as much as the manure does good. The second spreading should be made to touch every place which was not reached the first time, even if some places have to be slightly uncovered to do it, as the rain will have washed out enough to give all the plants a taste, where it lay in the first place.

It is better to spread small quantities of manure often over the surface of the whole farm, than to put large quantities on some places, letting other portions go without any, except for a few crops which require quick rich soils before the farmer has time to enrich his soil sufficiently by the slower process. This I know is against the teachings of Liebig and Way, as well as most of the agricultural writers of ancient and modern times. But I have the practical experience of our own country to sustain me, which after all is the surest teacher.

A sufficient quantity of manure applied to a thin soil at one time to make it rich enough for all crops, would be injurious to many. It would make the grass for pasture rank and rancid; instinct, as well as good taste, would teach the cattle and sheep to avoid it, unless they were starved to it, in which case it would be sure to give them the scours. It would produce a large quick growth of hay, of little taste or substance, and liable to lodge. It would have a tendency to make wheat rust and shrink,—especially with the aid of showery weather, followed by hot sun, just before ripening. It would make beets hard, woody, stringy, and tasteless. Turnips grown on a soil so highly manured, would be strong, and far less agreeable to the taste of man or beast, than if the same quantity of manure had been incorporated in the soil by the aid of grass-roots for a series of years, which would have sweetened the soil as well as the turnips. For corn or carrots, I do not think there is much danger of injuring the soil by any quantity of manure that a man would be likely to apply. They require a soil of high fertility, and their flavor is but little if any impaired by excessive manuring. While corn draws much of its nourishment from the atmosphere, it is necessary for it to have a rich soil to give it a good start and make it shoot forth ample leaves to feed upon each passing breeze; and after it is thoroughly prepared with its thousand mouths to feed upon its new element, it draws comparatively little from the soil. Everything depends upon a good start with corn, and he who puts it on the race-course had better see that it has a fair chance and free course at the word "go." It is not so much matter about watching it at the last end of the race, only to see that it comes in ahead of Jack Frost. With carrots it is entirely different. They feed from morning till night, from night till morning, and from spring till fall, upon the soil.

And therefore it is that John Johnston, Geddes, Benham, Harvey, and Standring, as well as myself, find it necessary every year to plow in a portion of our manure. But it no more disproves the general truth of my assertion, "that one load of manure on the surface is worth two plowed in," than any other exception disproves a general rule; and I believe it is an admitted fact among philosophers, that all general rules have their exceptions.

Sod ground with a good thick sward, besides furnishing the best and cheapest manure, protects the soil from drouth as well as frost, and above all things else prevents its leaching and running to waste.

Grass roots need hoeing and feeding as much as corn, and the grass, if properly cared for shows its keeping quite as well. It however requires very different treatment. While it is necessary for corn to stand at proper distances, the thicker the grass stands, the better; and while for the former the surface needs to be broken up and thoroughly cultivated, the latter needs a smooth unbroken surface. Therefore other implements than the harrow, the cultivator or the hoe are required for the cultivation of grass. Water is by far the best agent which can be employed for this purpose, but in places where it cannot be brought into use for carrying on and depositing the necessary material, the next best and cheapest way to do it is the best. I care not how it is got there; if properly applied, it never fails to pay. The best way in this case, as in all others, is to follow nature, who never makes a mistake. Look at the low, wet, cold, boggy places which are sometimes found in a plowed field, that could not at first be plowed, but which receive the washings of the plowed ground. The top-dressings thus carried on from time to time by the water, though forming but a slight covering, are equally as beneficial to the grass which grows there as the hoeing is to the corn. The same care and food, however, that would be sufficient for the grass, would be entirely inadequate for corn. Yet by the slow, sure process of nature, this cold, wet, boggy piece of land becomes, by oft repeated coverings, sufficiently rich and dry for corn.

Nobody denies that with sufficient manure to plow in, grass, as well as everything else, can be increased to an extraordinary yield, but the question under consideration is entirely one of *economy;* that is, how to apply it with the least waste and most profit, and when I say *profit,* I mean permanent profit to the soil as well as to the farmer.

The farmer that cares well for his grass in the beginning, will have plenty of manure in the end, but little to buy, and much to sell. A. B. DICKINSON.

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[For the Country Gentleman and Cultivator.]

PRUNING OLD TREES.

There is much difference between old and young trees with respect to pruning. And yet the same pruning is applied to all. This is a great error, and injurious to the trees; especially are old orchards badly treated. And yet old orchards may be so rejuvenated as to have the effect of young trees. But care is requisite; a proper study of the laws of the tree, which change with age.

I have had the charge of an orchard of eight apple trees for eight years. When I took my charge in hand, the trees were about forty years old. Some of them showed signs of decay. They had been treated in the ordinary way—some limbs removed occasionally, but no thorough care taken of the trees. I began my treatment by removing all dead limbs, and all that showed signs of decay. This, I argued, would turn the substance intended for these useless limbs into the healthy branches, thus increasing the health and vigor of the trees.

I thinned out where branches were too dense, and gave the sun a full chance. All this, however, I did not at one time, deeming the shock too great for the tree; but took three years to it, the second year removing only the shoots; the third year removing the effected limbs, some of which, to lessen the shock, I grafted. This somewhat continued the current of the tree in those limbs. I found these grafts among the thriftiest I ever saw. Now and then I would remove a decrepid limb to give place to a thrifty shoot. Of course I kept the tree clear from insects, which I found quite difficult at first. What infected fruit dropped prematurely I at once removed. Where fruit clustered too close I thinned it out.

The orchard was plowed but twice during the time. I deemed grass (timothy) a good mulch, and no injury from its slight roots to the tree. I let it creep up to the bole. The soil was a deep rich gravelly loam.

My orchard is among the oldest in the neighborhood. It is the only thrifty old orchard. It is the only one that bears fruit abundantly, and of good size and quality. It is a sight to see the trees,—and this alone almost pays for the trouble. The labor now is but little, as there is a scarcity of insects, and only thumb-and-finger pruning necessary, except in two trees which show signs of decay. These I prune yearly by removing some of the large limbs. I thus have reduced these trees, the one by half, the other three-quarters, or there is but one limb left, the central one, and a large one, and among the thriftiest in the orchard. Its fruit is the finest, and it bears yearly a good crop. But it is hardly age alone that affects this tree; over half of the bole is rotten, a hard rot. The other stands near the foot of the kitchen-drain, and ashes have been scattered pretty plentifully near it. The bole is sound, the fruit is excellent and abundant every year; but year after year some branch shows decay.

Another tree (the ninth) was left without pruning, the fruit being inferior, and decay visible in its branches. This tree has been dead for several years. I am confident that by proper attendance, this tree would now be a fruit-bearing tree, and as healthy as any in the orchard, what there would be left of it.

My trees generally are not large—not so large as once. They show numerous signs of branches removed, and in consequence, are awkward in shape. The shoots and grafts add to this; but the lustiness of the trees makes up for the loss. There are two trees from which no branches have been removed. These are large—one forty feet in diameter, though its bole is not larger than the other trees of the orchard; but their fruit is less in proportion, and of less excellent quality. I expect in a few years to see some of the limbs wither. I have thought it might be best to anticipate this by lessening the limbs, and thereby at least improve the quality of the fruit. F. G.

EDITORIAL CORRESPONDENCE.

The Rushville Show.

The Rushville Agricultural Society held its Fair at that place Sept. 22 and 23. It was well attended in view of the state of the times, and the exhibition of stock has seldom been excelled. Among exhibitors of *Cattle*, were the President of the Society, W. N. Perry, Esq., of Short-Horns; J. W. Williams, Middlesex; Ashley Thomas, Potter; Thos. Tufts, Gorham; M. A. Phillips, Middlesex; J. H. Wilson, Rushville; Hiram Harkness and L. D. Gage, Gorham. Among the prominent *Horse* men, were O. S. Williams, Middlesex; D. A. Sutherland, Abner Dwelle, L. Dow Gage, G. W. Stearns, Jas. Wilson and A. Arnold, of Gorham; H. M. Boardman and Richard Sackett, Rushville; Dr. Crane, Benton; J. H. Holden, Potter; Addison Stearns and others. *Sheep* were shown by H. Arnold, H. Raplee, Lyman Washburn and Amasa Gage, of Gorham; J. W. Williams and Thomas Underwood, Middlesex; and Denton Bostwick of Potter. The display of *Fruit* was quite extensive, including several collections of fine appearance, and embracing a large number of varieties; in this department, the President Mr. Perry, the Secretary Mr. Stearns, and Messrs. H. M. Boardman, Myron Gage, L. Fountain, W. A. Dinehart, J. W. Williams, Jas. Christie, Hiram Harkness, Jas. Catlin, Jas. Stebbins, and R. Robson, were among the chief contributors. The show of *canned fruit* was particularly good, including samples from Mrs. Howell, Mrs. Boardman, Mrs. Perry, Mrs. Stearns and Mrs. Bassett.

Rushville lies partly in the county of Yates and partly in Ontario, in a charming valley and in the midst of one of the finest farming regions in the State. In the conversation I had with Mr. President Perry and with the Secretaries Messrs. Stearns and Sayre, I learned much that was interesting, and if "State Fair" business had not hurried me on to Rochester, I should have been delighted to take a day or two with these gentlemen, Mr. Metcalf and others, and examined still more closely the agricultural condition and resources of the locality. Among other gentlemen who were kind enough to give me some information about it, was Mr. W. T. Crittenden, and as his farm was right in sight of where we were talking, and affords moreover so good an example of *good* farming, I venture to transcribe here some details with which he was kind enough to furnish me.

Mr. Crittenden's Farm

Lies in the town of Gorham and includes 430 acres. His crops the past season have been of the following extent:

Wheat,	100 acres.
Barley,	40 do.
Oats.	40 do.
Indian corn,	60 do.
Clover,	50 do.
Timothy hay.	60 do.

The clover is mowed for a first crop of hay, and then a part or the whole of it, as circumstances may dictate, for a second crop of seed. In accordance with what we have always advocated as the true system for Grain farmers, Mr. C. feeds a large number of sheep, and with the aid of their manure and of clover, has vastly added to the productive capacity of his land.

But the sheep do more than to convert the straw of these large crops of grain, into an important source of fertility to the land. Mr. C. buys them in the Autumn, selecting wethers either from Western New-York or from Michigan, Merino and Merino grades, and keeps them in open yards with shelter attached. They can generally be obtained at an average of about $3 per head. They are fed with the hay—clover hay being regarded especially valuable—with the corn fodder, an acre of which, *well cured*, Mr. C. considers as equal in value to an acre of good hay; and with what corn they require beside. They are fed according to the season and opportunities of buying, in numbers varying from 1,000 to 1,500 each winter. They are sheared quite early, say in April, partly because, as will be seen from the uses to which the land is put, there is no pasturage for them, and partly because they sell better for market at that time than later. They shear an average of about 6 pounds wool, which sells for from 40 cts. to 50 cts. per lb.—the former figure being the price obtained in 1861—the latter the price obtained the present season. The wethers themselves sell for a little more than they cost, affording a slight return, beside all the wool brings, and the great value to the farm of thus working down the straw into manure. For the fodder and small quantity of grain they eat, and the comparatively little care they require, a very good return is accordingly received—Mr. C.'s receipts from this source varying from $2,500 to as much as $3,600 per year. Beside this, the hundred acres of wheat are expected to average 25 bushels per acre, and do it, too, one year with another. With the improved machinery of the present day, Mr. C. is enabled to take care of all this surface of grain, and do all other farm work, with the aid of about eight men in the summer time (for about seven months,) and two men in the winter.

The wheat is partly Mediterranean and partly Soules—the larger proportion, perhaps of the former, although the farmers here seem now to be increasing their area of white wheat by degrees, as a general thing. The wheat is always drilled in, and is thus found more certain to vegetate if a drouth follows the time of seeding, and less liable to winter kill.

The manure lies for the most part in the open yards till spring, when it is drawn out and piled; Mr. C. thinks the best method of applying it, to brush it in on the wheat land, as a top-dressing, after plowing and before sowing the seed. If he has not time to do this, he carts it out during winter or in the following spring.

The average size of farms in this part of the State is thought to be about 100 acres,—perhaps a little higher in the immediate vicinity of Rushville. On a farm of 100 acres, probably fully 25 to 30 acres will be sown to winter wheat. The system described of feeding sheep, is practiced by a few, but perhaps by none on quite so large a scale as by Mr. Crittenden. The average yield of wheat for the whole vicinity is reckoned at 20 bushels or a little more, while the best farms run up to 25, and often higher. The average corn crop is about 40 bushels shelled, the country over, and probably 50 on such farms as Mr. C.'s.

— Such figures as these prove that Farming in Western New-York is not quite in a state of decay. I trust the time is coming when the State will produce all the wheat and more, that is required for its own consumption; and nothing can advance that day more rapidly than the examples of such farms as Mr. Crittenden, Mr. Metcalf, and several others whom I had the pleasure of meeting at the Rushville Show. L. H. T.

Rochester, Sept. 24, 1862.

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☞ John M. Newton, Esq., of Newtonville, has sent us an apple weighing 16½ ounces from a tree but 16 years planted, and which this year produced three barrels; and this on the sandy soil of Watervliet.

Marshal Burt has sent us some fine samples of the Schuyler Gage plum from his garden in Hamilton-street.

President Wilder's Specimen Pear Grounds.

During a recent visit, we had an opportunity of examining these grounds at the most favorable time,—while the trees were in profuse bearing, and the fruit mostly approaching maturity. As many of the readers of this journal are aware, this collection is unequalled by any similar one in America, and no person has accomplished so much as Col. **Wilder** in the way of introducing new and valuable varieties, both of European and native origin. The pear trees, which closely cover several acres, are of various ages, but a large majority are from twelve to twenty years old. A dwarf Glout Moreeau, in bearing, is 33 years planted. Many others are nearly as old. There are about two thousand five hundred specimen trees of good size in all, and not less than *eight hundred varieties*—and all being under a high state of cultivation, and the crops having been judiciously thinned so as to afford a growth of the finest specimens, the whole collection presented a truly magnificent appearance.

President **Wilder** has not however given his attention exclusively to fruits. In the cultivation of ornamental plants, he has been eminently successful. He has now many hundred Camelias, which form a beautiful display in winter. Some of the readers of the **Country Gentleman** may remember the two new varieties he produced some years ago, which were eagerly bought by a dealer at five hundred dollars each.

As a successful patron of rural art and rural improvement, he has no superior if his equal in America. The numerous public offices he has held, in connection with both Agricultural and Horticultural Societies, show the appreciation with which his labors have been universally regarded. This is not, of course, the place to speak of the high positions he has held in political life, nor of his success in the commercial world, but it may not be out of place to say that he maintains an elevated rank among the most eminent merchants of Boston, and the magnificent building occupied for this purpose on Winthrop Square is perhaps only equalled by Stewart's celebrated "dry goods palace" in New York, and even this in some erspects is inferior.

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WORCESTER AND VICINITY.

A drive through many parts of the fine agricultural region of Worcester county, Mass., presented a number of objects worthy of record—although performed with other than agricultural purposes in view. On the grounds of **Edward Earle** of Worcester, are many fine bearing pear trees, that show how successfully this fruit may be raised in this region. The large Buffum tree, grafted twenty-three years ago by his own hands, is a sight to behold! The trunk is ten inches in diameter, the tree over 25 feet high, and the top about 20 feet in diameter; the pears literally hung in masses over the whole tree. The crop is estimated at least twenty-five bushels. It bore twenty bushels in 1860—the present is a much larger crop. A *dwarf* tree of the Sieulle, twenty-three transplanted, and now in a state of vigor, bears at least five bushels. Dwarf Angoulemes and other sorts are about the same age, and are thrifty and productive. A fine tree of the Winter Nelis was loaded with several bushels of fine specimens. Edward Earle took me in his carriage to Leicester, a few miles northwest of the city, to a place of some hundreds of feet of higher land. Formerly, fine peach orchards bore abundantly nearly every year at this locality, but the trees throughout the county have been latterly neglected and allowed to run out. I did not see more than a dozen or two of peach trees in all my rides, yet some of these were loaded with fine crops. The same rule which has been observed to hold elsewhere appears to exist here, namely, the more elevated portions of land are best for peaches, and low valleys, which are more subject to sharp frosts, prove unfavorable. Shrewsbury, which is on high land, is another excellent locality for fruit, while Boylston is low, and unfavorable. Near Worcester, I saw a fine specimen of nature improved by art, in a full-headed ash tree, a few of the lower branches of which were grafted with the weeping-ash, and these grafts growing luxuriantly, droop in rich masses, and form a beautiful whole with the rest of the head. This example might be copied with advantage in many other instances.

Near New-England Village, I examined a fine orchard on the farm of **Samuel Knox.** A portion of it consisted of 48 Baldwin apple trees, sixteen years old, on an acre of land. The trees had not received any special attention until within two years when it came into the possession of the present owner. They are now about half of full size. He manured the orchard at the rate of 40 two-horse loads per acre, and plowed it ten inches deep, cutting off many of the upper roots. I observed portions of roots plowed up, as large as a large walking-stick. Over a cartload of such pieces had been drawn off from the acre. The trees were nearly all profusely loaded with large fine apples. It was estimated that an average of at least two barrels would be obtained from each tree, or about a hundred barrels per acre. I never saw trees bending under greater crops—although the apples were of good size, they were literally like strings of onions.

At the fine farm until recently owned by A. F. **Wheeler**, now by F. **Wood**, near Grafton village, was a dwarf pear orchard of a thousand trees, set on land trenched 20 inches deep and well manured. The trees were obtained from Western New-York, and were all alive; they were all growing vigorously except six. But the most remarkable part was the crop of beets on this acre and a half. They were in drills 32 inches apart, and a foot to a foot and a half in the drill. Many of the roots already measured more than six inches in diameter. I inquired of the owner his estimate of the amount of the crop. He stated that he had taken up a measured portion, regarded as an average, but the amount thus estimated was so large that he was unwilling to give it. He however afterwards consented to do so; it was twenty-five hundred bushels on the acre and half, or over sixteen hundred bushels per acre. I never saw before a beet crop of this area that would compare with it. It will of course grow considerably before it is harvested, it being then early in autumn. On another piece of land, similarly treated, and planted with carrots, the green tops of these roots covered the whole surface, and formed a mass of foliage measuring two feet and a half high. These crops show what the soil of Worcester county is capable of producing with manure and deep culture. The former owner, and the raiser of these crops, a young man of much intelligence and enterprise, was just leaving for the war at the head of a company of volunteers. J.

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Book on Sheep.—Will you state in **The Cultivator** the best book on sheep breeding, where it can be had, and the expense? **Woolverine.** *Ann Arbor.*]Youatt & Randall's "Shepherd's Own Book." We will mail it to you post paid on receipt of the price, $2.]

HOUSEHOLD CONVENIENCES.

In the Illustrated Annual Register for 1862, are given directions for the arrangement of farm tools in the tool house, so as not only to present a neat appearance, but to give an exact place for everything, and to have everything in its place; and the hand can be laid upon any tool in a moment. We propose to suggest something of the kind for the different articles that are commonly seen in the living-room of the dwelling, stowed away in the closet.

Every good housewife has neatly arranged cupboards and dish closets. Everything has its appropriate shelf and division. But there are other things for which provision should be made—and especially is the interior of a closet not always a picture of perfect order and neatness. A pile of books is sometimes seen in one part of a dining room, a few newspapers in an other, and a pair of shoes in a third. Now we do not propose to give minute directions for disposing of everything that ever finds its way into the house, but offering briefly a few suggestions, that may lead to other similar suggestions in the mind of the housekeeper, and sometimes important improvements may possibly be made.

The inside of a closet is sometimes a mass of confusion. Half a dozen garments are hung promiscuously on one hook or nail; others are thrown down on the floor, among heaps of shoes, boots and overshoes. There is no satisfaction in witnessing such medleys. If there are no shelves in the closet, provide a regular row of brass hooks around the interior, and allow but one article to occupy each. Let one side be appropriated to one kind, and another side to another kind, having all systematically arranged; and it may assist in perfecting this arrangement to write neatly and distinctly the name of each article on a small slip of white, pink, or green pasteboard, and attach it by two small tacks over each hook. Then provide a row of shoe pockets near the bottom, or on the inside of the door. These are made by taking a piece of worsted, brown muslin or calico, making it into a bag wide enough to reach across the side of the closet or door, dividing it into several compartments by vertical seams, and then tacking the upper edge to the wall or door. Vertical strips of narrow braid tacked against the wall may serve for making the compartments. They will each receive a pair of shoes, and should not quite cover the whole of the shoe, but leave a small portion projecting, that they may be seen, and be easily withdrawn. If made of worsted and trimmed with colored braid, they will have a neat appearance. It is a good rule to deposite nothing on the closet floor, where it is sure to interfere with sweeping, and usually to retain or conceal some dirt. •

A *divan* may be made by covering a good strong box a yard long, or a good well selected shoe-box will do for this purpose. The lid should be on hinges, and the top covered with a cushion nailed to it. This will make a convenient and comfortable seat for the sitting room. The interior should be divided into several compartments, and may be used for keeping various articles in. One part may be for shoes or overshoes, another for cast-away newspapers, &c., but whatever is kept within, let them be in neat condition, and handsomely arranged. *The habit of carelessly stuffing anything away out of sight, in hidden places*, is a bad one, and will lead to careless habits elsewhere, or is the result of such bad habits. Whatever is done, whether concealed or otherwise, let it be neatly and well done.

Those who write many letters should have a cabinet expressly for arranging and keeping them. If nothing is already made and provided, have a carpenter or cabinet maker construct one as follows, which need not cost more than two or three dollars, with a handsome finish, and varnished. A common or medium sized letter is 3 inches wide, and 5½ inches long; a small cupboard or cabinet, therefore, that is 6 or 7 inches deep from front to rear, inside, 14 inches wide, and 20 or 24 inches high, may be divided into 24 compartments or pigeon boxes, four in width, and six in height—or one for each letter of the alphabet. Some of the letters, such as X or Z, will scarcely need a separate place, and one may be marked "*unanswered* letters." As soon as a letter is read, place it in the last named compartment; when answered, mark on the end of the envelope, outside, the name of the writer, the date, and briefly the contents or subject, and place it in its proper box. Any time within a year, each may be quickly found, by simply observing the first letter of the writer's name. When the year is up, pin up these letters in strong paper bands, mark the letter of the alphabet and year outside, and pack them away till they are outlawed.

It often happens—much oftener than it don't—that housekeepers have *work-baskets* that are a sort of *omnibus*, containing a miscellaneous and confused mass of all sorts of odds and ends—plenty of odds, and all sorts of ends—such as buttons, needle papers, balls of yarn, half knit stockings, tangled skeins of silk, balls of beeswax, scissors, spools of thread, paper patterns, crooked pins, &c., &c. To find anything, the owner tumbles the whole over and over, and when out of patience turns all the contents on the table and searches the pile. A better way is to procure a basket made with compartments, or insert divisions of thin boards, or thick pasteboard. These, if covered with strong colored paper, will give a neat appearance. A circular work-basket, with a row of small compartments around the inside for small articles, and a larger space in the center for the rest, is very convenient. These smaller compartments may be made by dividing a worsted lining, by setting in pieces of wood or pasteboard, all pointing toward the center of the basket. If of wood, they are secured by means of very small tacks driven through a strip of narrow colored braid set on the edge of each piece of wood; if of pasteboard, they are sewed in.

There are many other contrivances that will suggest themselves to every neat and ingenious housekeeper. If any one thinks it too much "trouble" to provide all these, let her go through with a fair calculation of the time spent every year in hunting through her work-basket to find a missing article; in searching for a lost over-shoe; in clearing up the scattered items of a sitting room when company is coming in; or in long searches for some particular letter in a large drawer-full. Scarcely a day passes but more or less time is wasted in this way, amounting to many days yearly; while the satisfaction and saving of vexation by a perfect system and arrangement throughout, are much greater than the saving of time.

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[For the Country Gentleman and Cultivator.]

EXPERIMENTING IN BEES---No. 2.

July Swarms.—I recollect trite sayings, current many years ago, of the comparative value of swarms in May, June, and July. "A swarm of bees in May is worth a load of hay. A swarm of bees in June is worth a silver spoon. A swarm of bees in July is worth a bushel of rye;" and another, reading "a swarm of bees in July, let them fly."

I have six July swarms, that, by securing a part of their first labor, have been worth a pretty good silver spoon:

1st hived—July 25, 1860, filled a box weighing 12 lbs.; the first season—in 1861, gave 68 lbs. of honey in the boxes, and this season gave a swarm July 10th. Aggregate, 80 lbs.

2nd—July 3rd, 1861, gave 29 lbs., and this season, 11 lbs. =40 lbs.

3rd—July 4, 1861, gave 31 lbs.; this season, 6 lbs.=37 lbs.

4th—July 4, 1861, gave 26 lbs.; this season, 24 lbs =50 lbs

5th—July 4, 1861, gave 22 lbs.; this season, none=22 lbs.

6th—hived later, date lost—in 1861 gave 19 lbs.; this season, 13 lbs.=32 lbs.

This gives an average on each swarm for each season, of 20 lbs.

It will be seen that the June swarm did the best. But little honey was made in the boxes after July. The amount taken from the six July colonies the first year, was 139 lbs. averaging a fraction over 23 lbs. to each. This was almost entirely the best of honey, gathered from white clover, and sold for 25 cents per pound. The same swarms this season have given but 41 lbs. and one swarm. There are two principal reasons for this difference. This season has not, here, been as good as the last; a second reason is, that in storing so much honey in the boxes last season, the hives were not more than half-filled with comb. In the winter, so poorly protected, large numbers of each colony perished. Hence they commenced this season weak, and the early, best part of the season was required to fill the colony with laborers.

The early part of the season is strictly the honey season—the season of flowers. The swarms in June 26th and 28th, 1861, gave the first 46, and the second 34 lbs. last season, and had, the first 30, and the second 34 lbs., stored for winter. They gave this season, the first 44 lbs., and the second, 16 lbs. and a swarm July 3d. Had but one box been placed in each hive for honey in the July colonies, there would probably have been from 10 to 12 lbs. secured from each, and the balance of the comb and stores placed in the hive, have protected and carried them through the winter strong and vigorous, to enter upon the work of storing honey early in the season, and by that means they would have done nearly as well as the June swarms. **Jasper Hazen.** *Albany, N. Y.*

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[For the Country Gentleman and Cultivator.]

HOW TO GET A FARM IN ILLINOIS.

Eds. Co. Gent.—Notwithstanding we live away out here in the Sucker State, we take your paper, and read it to advantage, we think. We have been some amused at the correspondence which has been published in your paper since the inquiry was made as to the best way for a poor man to get a farm. In the number for Sept. 4th, Mr. B. of Jamestown, N. Y., gives a gloomy account indeed of those who intend to *try* to buy a farm. The idea of giving one-half of all raised, beside hauling rocks, cutting so many broad acres of brush, building pig pens, making sheds, &c., all for the privilege of living on a poor farm —(Mr. B. assures us that none but poor ones are offered for rent)—looks more like a joke than a reality to a Western man.

I am not accustomed to writing letters for publication, nor am I in the habit of giving advice, but after reading such gloomy accounts as those given since the inquiry was first made, I determined to try my hand at it. And now I would say to all those who have the pluck to try to get a farm under such disadvantageous circumstances as Mr. B. speaks of, to pull up stakes and come to Illinois, where we will bid him a hearty welcome, where there are no stones to pick, nor brush to cut around stumps and in fence corners, and where, if you persist in renting, your landlord will ask one-third of the grain raised, pay all taxes himself, and furnish you with house, fuel, &c. But still a better way would be to buy a farm for yourself should it be only 40 acres. Mind, our lands are not encumbered with rock, brush, &c. But your whole 40 acres is a perfect garden spot, and all the stock you may have can roam on the prairies at large, which are covered with a luxuriant growth of grass of the best kind for either pasture or hay.

Now you will probably be ready to inquire what such land can be bought for? It will cost from $3 to $10 per acre, unimproved, and from $5 to $20 improved, and this on almost any time the purchaser may desire. The Illinois Central Railroad Company has, as you are aware, obtained from the general government a large grant of land to aid them in the construction of their road, which has been built, and hence the title is perfect. The company are selling their lands now, and thousands of just such men as your correspondent seem to be availing themselves of the liberal terms to secure to themselves homes, and thus avoid renting lands, or in other words, becoming landlords instead of being tenants. Their terms are as follows:

Say Mr. B. buys a farm of 40 acres, at $5 per acre—$200. If paid in cash down, a reduction of 20 per cent. will be made—$160, which will be the entire cost. If the purchaser chose to avail himself of the time given, it would be thus—$200, at 6 per cent. for four years, $12 per year—at the end of said time one-quarter of the principal comes due—$50, which amount comes due annually until the principal is paid. Thus enabling Mr. B. to make the price of his new home from the land itself.

According to an act of our State Legislature, all their lands are exempt from taxation until paid in full, which is of itself considerable inducement at a time like the present, when high taxes stare every man in the face.

I have thus endeavored to give the outline, hoping it may lead those who are laboring so hard to become lords of the soil, to examine into the matter at least. I would say farther: This is a healthy place; good pure water is abundant; society is good.

Now, gentlemen, let me advise you to quit renting lands in New-York, or any other place where you have such hard task masters, and where the lords of the soil ask double what the lands are worth. Should you happen to ever be able to buy yourselves homes, come west; we invite you to no mean country, but to the garden of the world. This is admitted on all hands. Illinois is but an infant in years; still she is the fourth State in population, and in the amount of grain raised; and the amount of cattle and hogs the first in the family of States. We will welcome you with open arms to our broad prairies and fertile soil, and where the inhabitants are loyal to the best form of government the sun ever shone upon, where the people respond to their chief executive whenever he calls; and I will here say, and I must confess with feelings of pride, which the past proves, our people are ready and willing to leave friends and pleasant homes, and rally at our country's call. It matters little whether our quota be 30,000, 40,000, 50,000 or 100,000 men, we are ready. Old Abe is our man, and when he speaks we will respond. Our cattle are all fat, our hogs also; our granaries are full of small grain, which now command a good price. Our corn is all worked, and nothing now remains but to take it off. Our mothers, wives, sisters and daughters say, let all the men go if necessary; we will gather the corn. Thus you see we are ready. Illinois has entered into the struggle, determined never to sheath the sword until our good old flag shall wave from the Lakes to the Gulf, and from the Atlantic to the Pacific oceans.

Champaign, Champaign Co., Ill. I. B. PORTERFIELD.

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[For the Country Gentleman and Cultivator.]

Mode of Saving Egg-Plant Seed.

In your number for Sept. 27th, 1861, p. 207, I notice a mode of doing this, which I think more laborious than is necessary. My mode has been this. Place your ripe fruit in some vessel of small value, such as an old pail, tin-pan, or even on a large plate. Here let it rest for an uncertain period, depending on the temperature of the cellar or room where it stands, until the fruit decays and melts away to water and a little pulp. The seed may now be very readily washed from the impurities in which it is immersed. It should be understood that no common fruits, such as apples, melons, squashes, tomatoes, &c., suffer much injury to their seeds by such spontaneous decay. Few fruits are with me so uncertain in the number of their seeds, as egg-plants. I have found less than 20 seeds in a large fruit, and at other times perhaps ten times that number. In a good soil and season, with wise culture, the purple variety will ususually vary from five to nine pounds in weight. C. E. Goodrich.

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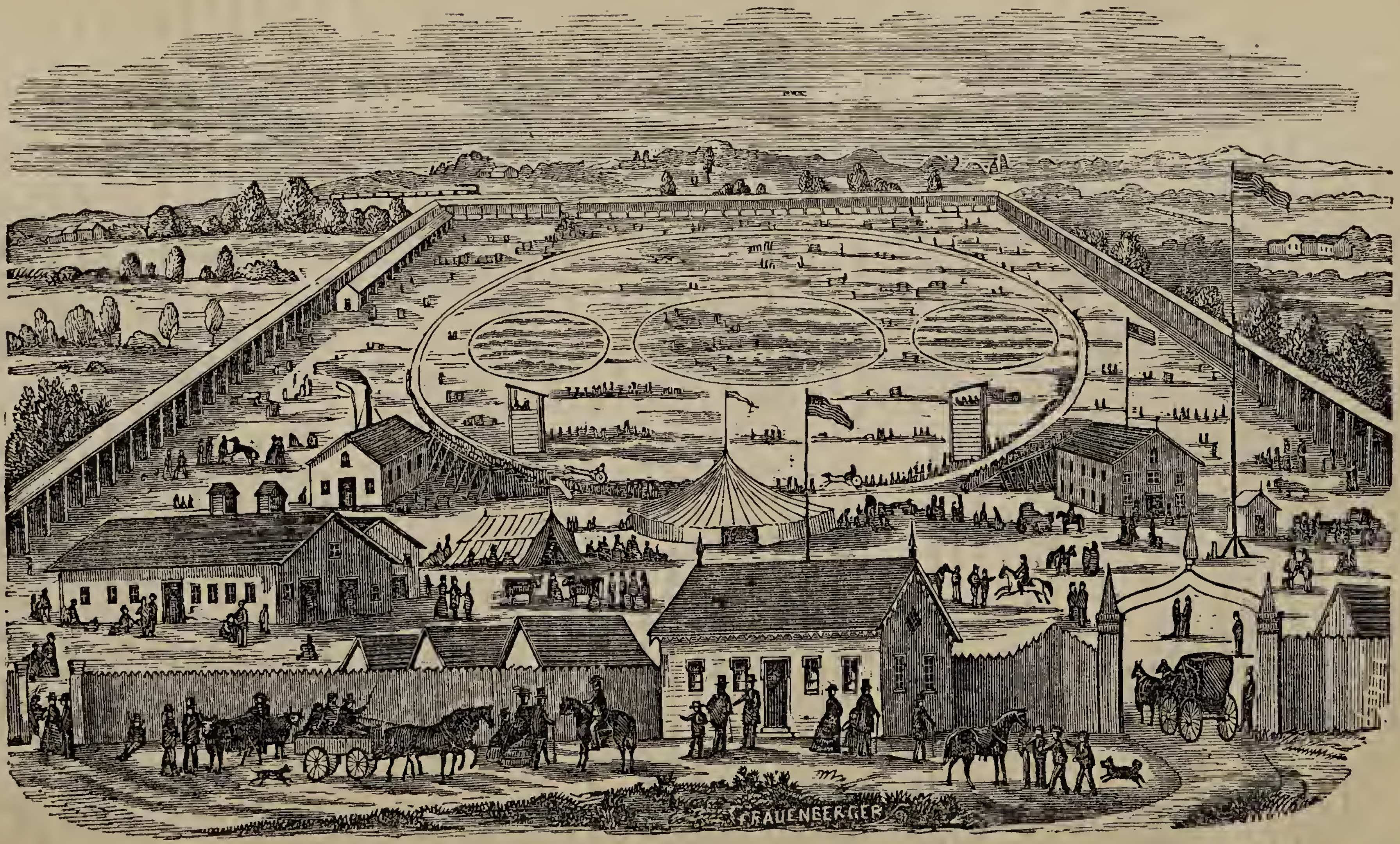
Men are generally like wagons; they rattle prodigiously when there is nothing in them.


FRAUENBERGER

VIEW OF THE NEW-YORK STATE FAIR GROUNDS AT ROCHESTER, 1862.

[For the Country Gentleman and Cultivator.]

THE STATE FAIR AT ROCHESTER.

Plowing Match.

There were nine teams entered as competitors for the various prizes at the plowing match; but only seven of the nine entered the field. We were assured that the others were unable to learn where the plowing match was to come off. Indeed, we almost despaired of finding the field, or even the farm, where the plowing was to be done. We know there was great inquiry for the place where the competitors were to plow, and doubtless there would have been a large number on the ground to witness the skill and emulation of the plowmen, if a few placards had been posted up, telling the place where, and the time when the plowmen would enter the field. As it was, there were only about twenty men and boys present.

The field where the plowing was performed was about one and a half miles from the fair grounds, on the farm of Mr. B. M. Baker. There was quite a stiff sod on the ground, and the soil was a beautiful sandy loam, and not a stone could be found in it as large as a pea; and besides it was quite too dry to plow good and easy for the team.

Each competitor was required to plow one fourth of an acre, or a plot about two rods wide and twenty rods in length, and to have it finished in two hours. Previous to plowing for the prize, each one was required to strike out a back furrow in another part of the field, and to plow two or three rounds on it. This gave each one an opportunity to adjust his plow, so as to be ready to plow for the prize.

At twelve o'clock, Thursday, the word was given to "go ahead," when every plowman, unaided by any driver or other assistant went around his own land, and they all finished in less than ninety minutes. One team completed the task in just sixty-two minutes. But they all drove their teams quite too rapidly, as there appeared to be some strife to get done first.

There was a premium of twenty dollars offered for the best plowing for a boy; but only one boy was on the ground as a competitor, and he was only a little short of ONLY *twenty-one years of age!* As the honest Dutchman exclaimed: "O, he wash such a nishe poy! He had such pig hands and so pig feet!"

As there was no competition, and as "the boy" did not perform the first part of his task quite equal to the requirements of the Executive Committee of the New-York State Ag. Society, the judges on plowing awarded him only ten dollars.

Question for the Executive Committee of the New-York State Ag. Society: How old must a boy be—how large—how heavy—how tall, or how long must his head be, before he can be called *a man*, or to exclude him as a competitor for the prize offered "for the best specimen of boy's plowing?" We pause for a reply.

The depth required by the Executive Committee was not less than six inches; but most of them plowed seven inches in depth—and one plow ran over eight inches in depth, and cut over one foot wide.

This was a "swing beam" plow, and it performed the poorest work of all that entered. But the fault was by no means in the plow nor in the team. Had it been properly adjusted, it would have operated as well as any other single plow in the field.

The kinds of plows used were two of the "Wiard plows," of cast iron, and two steel plows. One of these was manufactured by Remington, Markham & Co., Ilion, Herkimer Co., N. Y., and one by D. De Garmo, Rochester, N. Y., both of which did good work. Another kind exhibited a new and very important principle in plows, by which the beam could be readily adjusted to follow two or three horses abreast, equally well. This is accomplished by means of having two standards to the plow, and each one terminating at the top in a kind of foot, in which there is a slot, which receives the bolts which pass through the beam of the plow for securing it to the standards. Two of the plows had a small plow attached to the beam, just forward of the main plow, which forward plow is called a "jointer."

One of these was the plow of D. De Garmo, Rochester, who removed it and attached a cutter in its stead, as he understood by the committee that the plow thus adjusted would not be allowed to compete for the prize. The other plow thus adjusted, was allowed to run with the jointer on it. This did the best work, and received the first premium of $20. No one denied or doubted that this plow performed its task in a most superior manner. But it was not the kind of plowing required by the Executive Committee, and to allow one plow to operate with a jointer, and not another, created some little dissatisfaction.

The style of plowing required by the Committee was plowing "with a lapped furrow-slice." But a plow with a jointer attached, did not turn a lapped furrow-slice, properly speaking; for the turf in some places is rolled together, and left flat, while in others it is left on the edge; but at the same time, is so completely surrounded with well pulverized soil, that the entire soil appears as mellow and free from sod and grass as if it were the cross-plowing of a summer fallow. It is just the kind of plowing that ought to be encouraged by all agricultural societies; and it ought to be recognized as a distinct kind of plowing from either flat or lap furrow slices.

On the whole, the plowing was well done; and a man is not worthy of the name of a good plowman, if he could not plow well in such soil as that, with almost any style of plow. I would not appear censorious on this subject, but I do insist that it is not a fair test of either the excellence of plows, or of the skill of plowmen, to put them in a soil, *for prize plowing*, where there is not an obstruction in the soil or on it as large as a kernel of wheat. Still such a soil is almost always selected for that purpose. Could farmers always have such soil to plow, the case would be quite different.

In order to test the excellence of a plow, and the skill and dexterity of a plowman, the fairest way would be to select a variable soil, where the hard-pan in some places comes to the top of the ground, and where the plow must go through gravelly bars of calcareous clay, and then encounter stones, and then plunge into a stratum of muck. Farmers are obliged to take the hard with the easy in plowing their fields. They cannot select a smooth plot where a plow will almost run alone, and say, let us display our skill in plowing here. By no means. A man is required to drive his plowshare at a uniform depth through bars and hollows and knolls, and around stumps and stones, and to perform his work well; and if he is possessed of any skill, some of it will be snatched out, as he will often be taken off his feet if he does the work well. Such should be the soil to be plowed where prizes are awarded.

The furrows for the most part, were as straight as one could draw a line, which is a good feature in plowing; but, at the same time, is a small consideration in comparison with a given uniform depth. This latter consideration is a good test of plowing, and a far better test than straight furrows alone.

Subsoil Plowing.

After the surface plowing was completed, Wm. H. H. Burnham, East Homer, Cortland Co., N. Y., introduced a plow with a subsoil attachment. This plow turns a furrow slice as deep as desired, and a subsoil attachment follows in the furrow, and loosens up the subsoil, and leaves it in the bottom of the furrow.

It operated well with a single team; but with a double team it can be driven from one foot to fifteen or eighteen inches deep, according to the soil and the strength of the team.

I had seen this kind of plow operate in Auburn, Cayuga Co., and I am satisfied that it is a good improvement, and will prove more advantageous on some kinds of soil than to use a plow which throws the subsoil to the surface.

This subsoil attachment can be put on to any ordinary plow at a cost of a few dollars. S. E. TODD.

Auburn, N. Y.

[For the Country Gentleman and Cultivator.]

FEEDING MILCH COWS IN THE FALL.

Messrs. Editors—For some years I have made calculation to have some kind of extra feed for my cows during the fall and winter. I have found much advantage in doing so, not only that by feeding well in the fall I can bring my cows into winter quarters in better condition and that by good keeping through the winter they do better the next summer, but that we get well paid for extra feed in the increase in the quantity and improvement in the quality of the butter. This I have found to be the more desirable, as "choice fall made butter" always brings an extra price, and I seldom fail of getting one or two cents a pound over the regular market price for all we make to sell during the fall and winter. Hence I make it a point to feed, as much as I conveniently can, such kinds of feed as are best calculated to produce the most and the best quality of butter, and to feeding cows for this purpose what follows will be more particularly devoted.

For feeding in the fall I find pumpkins the cheapest, most convenient and satisfactory of anything I have ever raised. I usually commence feeding as soon as the corn is cut up out of the way so they can be drawn—though sometimes, when I have a large crop, before, if the cows can run on one side of the cornfield, so as to make it convenient to feed them. I have never taken any special pains in feeding, as taking out the seeds, or cutting up fine, or cooking, but have generally fed on clean grass ground, taking a little pains to break them up well, which, by the way, I have noticed has a tendency to jar loose and rattle out more or less of the seeds. I have generally fed them just as they came, ripe and unripe, unless I had more than the cows would need while they would save good, when a part of the best would be selected to cook for the hogs. We have never had any trouble from pumpkins drying up the milk; but on the contrary, whenever for any cause feeding the cows was neglected a day or two, I was pretty sure to hear in the house, "we don't get as much milk as usual, I guess the cows don't get any pumpkins." I have heard and read considerable about pumpkins drying up cows, but have never been able to account for it in any other way than to guess that at least one of the reasons why such is the case may be found in the fact that the cows were not used to them, nor perhaps any other extra feed. I have also heard that carrots dried up cows, and from what I have known of the practice of those that held this opinion, I have come to the conclusion that if it is ever the case that carrots dry up cows, the reason may be found in the fact that such cows had never been used to them, nor any other extra food. At least am satisfied that carrots nor pumpkins never dried cows for me in a single instance, and I have fed both for many years. And I have several times bought cows early in the fall, and fed them for the sake of making butter, and in more than one instance making enough butter from sometime in September to the first of the next June, to pay for the cow.

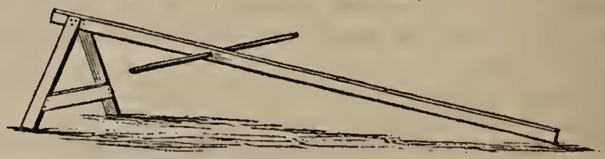
Next after pumpkins I consider cabbages the cheapest, handiest, and best feed for milch cows in the fall. Before the pumpkins are gone we commence feeding cabbages once a day, or a part of the time, in order to make the change a gradual one. They are fed freely once a day during the latter part of the fall, and more or less the fore part of the winter. Pumpkins are generally all fed by the fore part of November, when the tops of the different kinds of root crops are fed once a day, when convenient, though sometimes cabbages are fed twice a day. But generally when root tops are gone we are ready to commence feeding some kind of roots, usually carrots. I also find it a good plan to commence feeding cornstalks as soon as grass begins to get frost bitten and dried up.

We have never had any trouble with cabbages making milk taste bad, except in a single instance, when a part of a pile of cabbages that had begun to heat and smell bad were fed, when the milk had a nasty bad smell that made it unfit for anything but to feed to the pigs. I seldom feed cabbages, or any other extra feed, before milking. I consider cabbages excellent feed to make cows give milk, and should raise enough to have plenty to feed through the winter did I not find them more difficult to store and keep well through the winter than roots. But I shall continue to do as I have done some years back—that is, raise enough to have plenty to feed in the fall, and some for a change, or to feed occasionally in connection with other feed in the winter. F. *Western New-York.*

[For the Country Gentleman and Cultivator.]

THE CORN-HORSE.

The task of cutting up corn is always rather toilsome at best, and more so if the heavy fall winds and rains have caused it to partially fall, become crooked and twisted, and in fact, in just the condition not to stand up while shocking or stocking it, and still harder is it for the tired laborer if there chances to be a strong wind blowing, for his labors are still more difficult, and even after it is shocked, the shocks present anything but straight rows; besides not being set up in a nice substantial manner, it is very apt to lean and finally fall to the ground, there to become damaged and rotten. To obviate these difficulties a year ago this last fall I saw a simple machine constructed, which proved to be just the thing wanted, and as I have never seen a description of anything like it, I will give a description of it; and to those who have never tried it, and will give it a trial, I will warrant that they will concede a saving in some instances of at least one quarter of labor in harvesting. Take a strip of board 12 or 14 feet in length, 1 inch in thickness, and 3 or 4 in width, rest one end of the strip on the ground, and at the other end nail to it a couple of legs made of strips of boards, in same manner as the legs to a saw bench or horse, bringing this end about 3 feet from the ground, nailing a narrow strip across the legs to strengthen them. Then about 4 feet from the legs bore with an inch and a half auger a hole through the board, slipping through this hole an old broom handle or something similar; then your instrument is ready for use. Where the materials are handy, one can be made in twenty minutes. I will give a diagram, so that one can see at a glance the manner of making one.



Now for the mode of using it. Shoulder the corn-horse, take it to the fields, placing it wherever you intend to make your first shock. Cut an armful of corn, and place it in one of the corners formed by the broom handle and strip of board, being careful to give it a firm footing by jamming it up and down two or three times, and continue thus till the shock is of sufficient size to suit the taste. Cutting in this manner, the cutter has nothing to attend but simply to cut and stand up in the shock, a middle band not being needed, and the shocks will be more uniform, substantial and firm. It making no difference how much the corn may be down, you have something against which to stand the first hills, after a beginning being made, the stalks forming a mutual support. But the good qualities of the corn-horse are best seen, when the wind blows a perfect gale. (Some may say that this is no time for harvesting corn, but great expedition is oftentimes needed in cutting corn to get it out of danger of the frost.) In such a time as this, as much headway can be made as though it were perfectly still; whereas, without one it would be almost impossible to do anything at it. The corn-horse also obviates the necessity of setting round the hill, which I consider a great bother when one comes to husking or drawing to the barn, making it always necessary to bring a corn-knife or jack knife in to requisition at every shock before they can be husked or moved.

After a proper number of hills have been placed about the corn-horse, bind with two or three bands to the shock, as the height of the corn demands, the first band being placed as low down as possible, each band being formed of two dryish cornstalks, which can be selected by a little experience, forming as good, if not a better, band than either rye or oat straw, besides being a great deal handier and quicker of forming. Of course all cornstalks will not form bands; those that will are of a yellowish cast, the leaves being dryish. After the shock is bound, pull out the handle, (always having the legs or head of the corn-horse toward the corn to be cut,) step to the head of the horse, and carry it to the spot of the next shock.

Half an hour will make one perfectly familiar, besides giving him such an opinion of this simple little machine that he will never do without one, for with one he can do his work easier, faster, and better than without.

King's Ferry, Cayuga Co., N. Y. E. A. KING.

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[For the Country Gentleman and Cultivator.]

Husking Indian Corn by Hand.

Why will one man husk twice as much corn in a day as another? And why will many boys husk much faster than some men? Because, in one case, there is the exercise of much skill, while in the other there is no tact or skill manifested.

There *is* an opportunity to exercise a great deal of skill in husking corn, and I propose to show that the exercise of skill is highly important, in order to be a good and rapid husker.

In the first place, I will point out some of the errors in husking Indian corn, which characterize a poor husker; and then we will attend to some of the manipulations of a *good* and *skillful* husker.

A poor husker spends much time in reaching after the ears of corn, and in laying the husks and stalks aside. Some huskers will sit on a high seat or stand while husking, which position requires them to reach too far, and spend too much time in getting the corn in hand, ready to husk. While a man is stooping down to pick up an ear, a good husker will husk an ear. Picking up one stalk at a time, and placing it at one side of the husker consumes much time that ought to be spent in husking.

I will now lay down a few plain directions to be practiced in order to husk corn fast, and in a farmer-like manner.

After the stook has been pulled down, place the basket at the butt of the stalks, a little inclined towards the husker. Procure a little box for a seat, about ten inches high. If a husker is not discommoded by resting on his knees, a low seat may be dispensed with. Let the husker place himself close to the corn, so that it will not be necessary to reach far for each stalk. Now take an ear in the left hand, and with the husker or fid on the right hand, pull down half the husks. As the right hand goes down, let the left hand rise to the tip of the ear, and slip the thumb of the left hand over the end of the ear, taking off cleanly all the silk, and bring it down with the other half of the husks. Two quick motions of the hand will husk an ear neatly. As the left hand grasps the stem, prepatory to breaking off the ear, let the husks be retained in the hand, so as to protect it from becoming tender between the thumb and fore finger, where every ear of corn strikes it, as it is separated from the stem.

A quick motion is required in husking corn fast, and by following these plain directions, a man may husk much faster than he would when they are not observed. There is more science in being a skillful husker than there is in knowing how to shovel earth with ease and skill.

Assorting Indian Corn.

Many farmers never assort their corn, but deposit it all in a crib together. Those who do assort it usually haul it to the corn house or crib, and there pick out the poor. But I have always found it the most expeditious and convenient way to have two baskets while husking, and throw all the poor corn into one basket, and the good into another. This saves much time and unnecessary labor, and when a husker becomes accustomed to assort corn as it is being husked, he will like that mode much better than to assort it after it has been hauled to the corn house.

It will always be much better for both the poor corn and the good, to assort it as soon as it is husked, and deposit the poor corn in a very narrow crib—say not more than two feet wide—or on a floor made with narrow boards, placed three-fourths of an inch apart, so that the air may circulate up through the corn. By this precaution, poor corn will cure and dry out in a few weeks, so that it may be ground for feed in the former part of winter. When all the poor corn is thrashed or shelled with the good, it is not always as marketable as it would be, were it assorted.

Making Apple-Molasses.

Select good sweet apples—Tallman Sweetings are about as good as any other for this purpose—and wash them clean, and grind them fine, and allow the pomace to stand at least thirty hours before pressing. Let it be pressed gradually, so that too much of the fine pomace may not flow out with the juice. Let it be strained slowly through three thicknesses of flannel, before it is boiled. Boil it down in a *brass*-kettle—which is much better than an iron one for such a purpose, as iron will color it—and remove, with a skimmer, all impurities when it is boiling. When it is about of the consistence of thin molasses, put it in tight bottles or jugs, and it will subserve a good purpose for culinary purposes; and next season, during hot weather, a few spoonfulls mingled with a small tumbler of water, will make a most refreshing beverage. S. E. TODD.

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[For the Country Gentlemen and Cultivator.]

Remedy for the Bite of Rapid Dogs.

WASHINGTON, D. C., Sept. 25, 1862.

EDS. CO. GENT.—Yesterday I received from my old friend and cousin, certain datas concerning that most dreadful danger, the effects of the mad dog bite.

The most positive facts, and numerous experiments in Lithuania, near Odessa, in Volhynia, and as recently as three weeks ago, a case in Evangelice, where from forty to fifty persons were bitten by mad wolves, and yet the timely remedy applied succeeded most hopefully. A plant called *Euphorbia procera*, belonging to a numerous family of Euphorbia, very similar, but more hairy and not so glossy as Euphorbia ulcera, or Euphorbia silvestris, given in decoction, cures that dreadful scourge of one of our domestic animals.

The discovery of this belongs to Francis Wolanski, a resident in Austrian Galicia.

More complete description I will hasten to communicate you as soon as it reaches me; in the meanwhile I communicate this fact, which I deem the most important at any time. HENRY K. KALUSSOWSKI.

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THE GRAIN APHIS IN DELAWARE.—My oat crop, as well as the crops of some of my neighbors, have been much injured by the ravages of the red lice, which I suppose is only another name for the aphis. They were on my oats in such countless numbers as to give the field quite a reddish appearance. The injury they have done will reduce the crop one-half, and one person who has threshed some, told me that what he had threshed weighed only 20 pounds to the bushel. This is the first time I have seen such an insect on my oats. I am told that many of them blow *over* the fan while cleaning.

New Castle Co., Del. G. S.

[For the Cultivator and Country Gentleman.]

Getting Out and Curing Apple-Seeds.

Cider-mills and cider-making is suggestive of *apple-seeds*, a great staple with our nurserymen. Running water is indispensable in competing with present market rates for apple-seed. It is far better to haul the pomace a few miles to running water, than attempt to do without it, as a good load of pomace will yield one and a half to two bushels of seed. For getting out the seed, make a trough 10 feet long, 14 inches wide, sides 6 inches high, with gate at upper end; at lower end, a sieve of ordinary sieve-cloth, 3 feet long, with side pieces, and if the upper part of sieve is of finer meshes all the better. Set the trough and sieve all level—the latter to be moveable, and over a box tight enough to hold apple-seeds and yet let out the water. Absolutely fresh yomace is much preferred, as it floats off far better—a great object. Apple-pomace heats very soon after leaving the press. A slight heat is not objectionable; too much kills the seed. In warm weather pomace often spoils in three days, but can be kept safely enough by spreading thin on the ground, or subjecting to frost, and doubtless for some time by plunging it in water, which will "slack up" or loosen the pomace.

In the regular business of getting out apple seeds, breaking up the pomace is an important matter. The best mode is with cylinders, &c., made on purpose, like those of thrashing machines, and connected with the cider-mills, where, as in some cases, they are run by steam or water. Ordinarily an old fan-mill is used, taking out the fans and substituting a cylinder and bed-piece; the cylinder four or five inches in diameter, with say 50 spikes driven in the wood, and projecting two and a half inches. These cylinders any blacksmith can rig up, and the spikes cost but a trifle, one cent or so each. For a bed-piece use plank six inches wide, one and a half thick, with twenty-penny nails driven through. Set this fan-mill over your trough, through which a steady stream of water, three inches deep, should flow. On a small stream a narrower trough can be used. Sometimes stones are useful on the bottom of the trough to increase the agitation, and sometimes an inch cleet is fastened at lower end of sieve. The seed will require two or three runs through to get it clean. The second cleaning is done at close of each day's work. The pomace for 10 or 12 barrels of cider ordinarily makes one bushel of seed.

A simpler and slower mode is to use a large tub or vat, stirring up the pomace gradually and running it off the surface, while the seed settles at bottom.

Drying the seed—also very important—as when fresh and wet it is very subject to heating, which, unchecked, speedily ruins the germs. Seed from old partly heated pomace is more apt to spoil.

After the seed is cleaned, spread thin in the sun, and stir often to get the outside moisture off. Then spread in chamber or loft, with windows and doors open for free circulation. Of course, in warm, well ventilated loft, the seed spread thin would cure thoroughly and fast enough. But curing wholly in the sun is believed injurious to the vitality of the seeds. If not spread quite thin, must be stirred thoroughly two or three times a day—the oftener the better—to prevent moulding. Seed *can* doubtless be dried too much, but usually it is cured too little. Good, newly dried apple seed weighs 42 to 44 pounds to the bushel; older and more thoroughly dried, 40 pounds.

Seed from really heated pomace, always more or less damaged—not necessarily all bad, but unreliable—and always lighter colored than from good, new pomace. Seed when got out good at first, is made lighter by drying in the sun—or may be got out of bad quality, and darkened by drying on dusty floor. Good seed can generally be distinguished by careful examination, after breaking or cutting off the husk. If good, the meat is plump, and of a clear, pearly white, firm texture; if poor, the meat is less firm, and of a paler dirty white or yellow, and usually of lighter weight. The best way if you are not a judge, is to get of trustworthy dealers—among whom, from long acquaintance, we rank James A. Root of Skaneateles, New-York, to whom we are indebted for the foregoing directions, and who can find plenty of other endorsers to the quality of his seed. As to facilities there for getting out seed, it may be remarked that one cider-mill alone, near him, running by water, turns out 2,800 barrels of cider per year, when fruit is plenty.

And now for a hobby of ours. Why don't every one that can, *select his fruit for seeds*—especially in the North and West, where the climate is so severe—and get only from the most vigorous, hardy, productive, perfectly formed seedlings? "Like begets like," and it cannot be doubted that a few experiments of this kind would settle the matter as much in raising improved apple-stocks as horses or cattle. F. K. Phœnix. *Bloomington, Ill.*

[For the Country Gentleman and Cultivator.]

AGRICULTURAL ITEMS FROM MAINE.

The Grain Aphis.—These insects appeared in many localities—probably in as many as last year—this season, but were ten to fifteen days later than last year. Soon after they began to increase rapidly upon the oats, wheat, and barley, heavy showers and high winds almost entirely destroyed them. I say showers and winds destroyed them, because they disappeared immediately after them, and there were but a few to be found again. In 1861, I found them, July 25, on wheat then beginning to turn, in great numbers, and they continued to increase till the grains were all ripe.

Potato Rust and Rot.—About the 15th September I detected a spot of *rot* on an early potato that was cooked. The rust proper had been on the tops for some time previous to this in many places, and had been noticed to be steadily spreading. For some days, no one was seen who had observed the rot, but had the rust. Since the 20th of September the complaint is on nearly every one's greetings when met, though it has come so late that it is not thought it will be very extensive. They looked remarkably well till the rust came, but will be rather a light crop, because it has not been wet enough for them to set well, either early or late planted ones, yet the breadth was more than an average for some years.

Frosts.—There were in Franklin Co., in August, three (and in some places more,) on the 18th, 24th and 31st, all doing some damage, but the last the most. September gave two, on the 22d and 25th, still harder, yet not more than half of the corn and vegetables are killed, though the corn was materially checked.

The Season.—We are inclined upon the first thought to say "it is the dryest or the wetest that I ever knew," if it happens to be a little dry or wet at the time we would wish it to be a little different weather. But after all we here have had a dry and cold season. The spring was dry—a drouth; the summer was dry and the autumn is dry so far, that is, up to October. September has been very fine weather for corn, and for harvesting the grains.

Laborers and Wages.—It is a little difficult to obtain all the help wanted in agricultural circles at all times, while wages have been higher by the day, month or six months, than for ten years at least. This has given the day laborer, who has a family to support, plenty of work and good pay, which has generally been well improved, and the farm-work with machinery has thus been kept up to time. O. W. True. *Franklin Co., Maine.*

☞ The Indiana State Fair, judging from an account in the Prairie Farmer—the only one we have seen—appears to have been quite successful. It was held at Indianapolis, Sept. 30—Oct. 3. The receipts were sufficient to meet premiums and expenses.

CONNECTICUT STATE FAIR.

We had the opportunity of being present during the last day of the Connecticut State Fair at Hartford. The exhibition was in some respects a good one. The attendance of people, then, and as we were informed during the previous days, was very poor. This was ascribed to various reasons, but we much regret that it should have been the case. Undoubtedly the farmers of Connecticut will themselves regret, hereafter if they do not at present, that they have not accorded a more constant and generous support to their State Society.

Among the Live Stock, we saw nothing more attractive and pretty than the herd of Ayrshire Cattle exhibited by Charles M. Pond, Esq. of Hartford. Mr. P. was quite seriously injured by one of his bulls a few days before, and unable to be present. Seven of the cattle shown by him were imported, and one or two of those of his own breeding were marked by unusual excellence, and proved that he is well able to put to good use the judicious purchases he has made from abroad. Other exhibitors of this breed were Messrs. Byron Loomis, Suffield, H. S. Collins, Collinsville, and A. L. Collins, West Meriden.

Among exhibitors of Devons were Messrs. S. & L. Hurlburt of Winchester Center, so long and favorably known in connection with this useful breed; and the twenty-five stalls they filled, young and old together, were what might have been expected from their experience. We learnt from Mr. Hurlburt that he proposes going to England at an early date in order to secure fresh blood from the best sources. The Devons, as usual in Connecticut, were very fully represented; cattle being shown by Linsley Brothers, West Meriden, E. H. Hyde, 2d, Stafford, T. S. Gold, West Cornwall, James A. Bill, Lyme, B. S. Andrews, Waterbury, J. N. Blakeslee, Watertown, and others.

Messrs. John A. Taintor of Hartford, and John T. Norton of Farmington, were the principal exhibitors of Alderneys. There were some good Short-Horns from Timothy Mather, S. W. & D. G. Ely, Newton Carter, Vail & Smith, Thomas Cowles, Farmington, E. A. Phelps, Avon, and other Connecticut breeders, and one bull from S. R. Bowne of Flushing, N. Y. The show of Working Oxen was said to be good, but we saw only a small part of it. We also heard the display of *Horses* well spoken of, particularly the exhibition made by Mr. Geo. C. Hitchcock of New Preston, who showed the stallion "Ashland," bred by Jas. B. Clay of Kentucky, with no less than ten of his colts, also the mare "Highland Mary," noted for her speed, and six or eight other fine animals young or old. We did not see anything of the *Swine*, nor much of the *Sheep*, in which latter class the Long and Middle Wools appeared rather to have the preponderance. Jas. A. Bill, Lyme, T. S. Gold and T. S. Hart, West Cornwall, A. H. Porter, Bloomfield, and Stanly Griswold, Torringford, were exhibitors.

The display of *Fruit* was very large and good, including apples, pears, peaches, and grapes, from a longer list of contributors than we have room to chronicle. Among them were Ellwanger & Barry (Rochester) and W. Brown Smith (Syracuse) of this State, as well as the most prominent nurserymen of Connecticut, and a good representation of her most successful amateur horticulturists. The general appearance of the fruit, as is this year so generally the case, was extraordinarily fine.

Among the *Implements* there was a good deal that was valuable and interesting. A trial of Mowing Machines was held Friday morning, on a farm near by, but we did not learn its results before leaving. Among the competing machines we noticed Allen's new one-horse mower, which cuts a three-foot swath without apparent exertion to the horse,—also the "Buckeye" and other prominent machines. Mr. H. C. Hepburn was present with Evans' Rotary Digger, which has been reduced from its once cumbrous proportions, and now looks as though it might do excellent work, to the width of twenty inches, without unduly fatiguing the team. Mr. H. promises a careful field trial of this implement before long, which if possible we shall attend and report.

As a whole the Exhibition, excepting only the attendance, was thus a very creditable one. The number of entries was, of Cattle, 324; Horses, 150; Sheep, Swine and Poultry, 165; Agricultural Implements, Vegetables, Grain, &c., 183; Domestic Manufactures, 106; Cotton and Woolen, and other articles of American manufacture, 106; Horticulture, 398. Total, 1,512. We are sorry to have to add that there were so few present on Friday, when the address was to have been delivered, by Prof. John A. Porter of New-Haven, that the Executive Committee deemed it wise to omit this part of the proceedings, and Prof. Porter was therefore requested to attend the Society's next Annual Meeting, where a fuller and more appreciative audience will probably await him.

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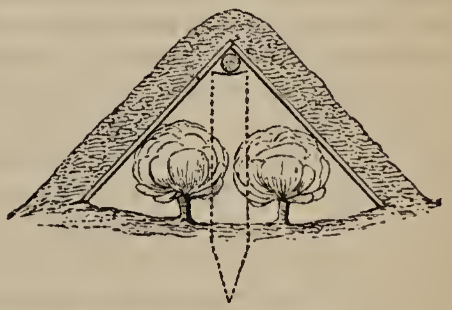
HEADING CABBAGES DURING WINTER.

It often happens that many cabbages have not formed heads in autumn on the approach of winter, and these are usually rejected and thrown aside. The mode we have adopted to produce heads from these has been long known to some of our readers, but we discover that it is rarely practiced. A brief description may therefore be useful: Take up all these plants and set them as closely as they will stand in a double row, in their natural position, in a wide and shallow trench. Form an earth roof over them in the following manner: Set in a piece of upright plank at each end to support the ridge pole (shown by the dotted lines in the figure.) Place a rail or stiff pole on these for the ridge pole, and on this the ends of the short pieces of board in the form of a roof. Cover these boards with about six inches of earth, or enough to keep the soil from freezing in which the cabbages stand. This is the whole operation. Nearly all of these will be handsomely headed by spring, and being entirely excluded from light, they will be more delicate both in appearance and flavor, than common cabbage heads. Two hours labor last autumn, gave us a fine supply of cabbages for a moderate family nearly through the whole spring.



Failure has sometimes resulted by not covering the roof with sufficient earth to keep out severe cold. About six inches does well for the Northern States. A sheltered place is best. We have allowed a very small ventilation at the ends, but have not experimented with a view to discover how much is best.

Fruit Growers' Society of Western New-York.

The Autumn Meeting of this vigorous association was held at Rochester on the 30th ult., with its usual full attendance. It was chiefly occupied with the discussion of Grape Culture, Fire Blight, Peaches for Market, &c.

Some splendid fruit was on the tables, among which were observed specimens of Louise Bonne of Jersey three inches in diameter, and four and a half long—beautiful bunches of Hamburg grapes 10 inches long, and White Nice a foot long—berries of Wilmot Hamburg averaging a full inch in diameter, &c. C. H. Rogers had fine specimens of Muscat Hamburg, that were pronounced by several, the best grape they ever tasted. Most of the fruits were, however, on exhibition at the State Fair Grounds.

Native Grapes.

G. Ellwanger said that he had cultivated the Hartford Prolific six years—it had been increasing in favor, and the present year it stood higher than before—for general cultivation, he placed it first on the list. It did not mildew so much as the Isabella. The Delaware, for wine making, he thought the only variety that could be used without sugar; and it is of much finer flavor than the Hartford Prolific. C. Downing said a neighbor had very successfully grown the Concord, but it would not succeed with him. The Delaware grew and bore better—so much for a slight difference of locality. He thought the Creveling a much better grape than the Hartford Prolific, although a few days later. The latter is too liable to drop. C. L. Hoag of Lockport, had changed his opinion somewhat by the results of this year. The Delaware he regarded as the best; the Hartford Prolific has increased in favor—it produces twice as much as the Concord. When the vine grows vigorously the berries scarcely ever drop—on shoots of slower growth this difficulty becomes quite an evil. He regards the Isabella as especially valuable for keeping in winter. The Delaware, Hartford Prolific and Diana he found not to keep well. H. S. Ainsworth considered the Hartford Prolific as unquestionably the best *very early* grape we have, and there its merits end. As soon as other and better sorts ripen, it becomes of little value. It will not keep long. The Delaware he regards as the finest variety, and if, as he supposes, it will keep in winter, it is the most valuable sort for market. He thinks it decidedly superior to the Hamburg for flavor. He likes the Concord better than the Isabella, although the "after taste" is not quite so good—he said the superiority of the Concord was owing to its complete ripening, which is rarely attained by the Isabella. He stated that the reason that Naples, at the head of Canandaigua lake, had been so successful for the culture of the grape, was the sheltering influence of the surrounding hills, and the porous nature of the subsoil effecting perfect drainage for many feet in depth. Dr. Miner of Honeyoye Falls, said the Delaware with him had proved quite as early as the Hartford Prolific; had ripened this year two weeks ago. The Diana had proved the best keeper in winter—the Delaware did not keep so well, but dried up like a raisin. L. F. Allen of Buffalo, said that five years ago, when here, everybody spoke in the highest approbation of the Isabella—he was satisfied then that opinion would change—the berries scarcely ever ripened—they are excellent as far south as New-York city, but we are too far north for them. On hearing newer and early sorts coming into favor, he was satisfied the earth moved some. He thought much depended on climate, position and soil—and each variety must have a locality adapted to it. On Kelly's Island near Sandusky, the soil is clay, on a porous limestone, where the drainage is perfect, and so favorable are these influences, that even the Catawba ripens there better than at Cincinnati. As for manufacturing wine, he had for several years past been on different wine tasting committees in various cities, and he had never yet tasted a bottle of good American wine, (except it be the sour Catawba wine;) all he had ever seen was mere syrup, "fit only for women to drink," he added. Daniel Webster had pronounced such wines as simply a mixture of "vinegar and molasses." C. L. Hoag said that he placed away a box of Delaware, for winter, but they were overlooked and not observed till summer—they were then dried up, and made quite good raisins. He therefore thought there was enough sugar in them for wine making. C. Downing said no grape kept as well as the Rebecca. Reference having been made to the Ontario, C. Downing said it was identical with the Union Village, very large, ripens with the Concord, about equal in quality, and the vines tender. J. Salter had fruited the two, and considered them quite distinct. Dr. Beadle of C. W., had found the Ontario a very little earlier than the Isabella, and not quite equal to it in quality. E. Moody of Lockport, had visited the original Ontario vine; the owner had some way of hastening maturity, either by ringing or otherwise, and he thought the recommendation of its early maturity should be taken with considerable allowance.

Culture and Management of the Grape.

SUMMER PRUNING. G. Ellwanger prefers disposing of the laterals by the middle of summer, leaving two or three leaves each. He would not touch the tops till the first or middle of September; if removed sooner, the vines would be sure to sprout again below. The heavy pruning should all be done in November, if covered—if not, not till March.

Manures for the Grape.

De Wolf of Wyoming, uses barn-yard manure exclusively; applies it well rotted to the surface. He uses all the unleached ashes he can procure for applying to the soil of his vineyard. Is strongly opposed to the use of dead animals, but could not state any facts on this point, except that he "thought" he could taste them in the grapes. —— Wolcott of East Bloomfield, had planted a vineyard, and buried 30 or 40 tons of dead animal matter, on about three acres, or equal to about five sheep under each vine—but considered it important to have them *well decomposed*—when thus decomposed they proved very useful. B. Fish had placed portions of dead animals mid-way between the rows, and found no inconvenience, nor perceived any bad taste. G. Ellwanger would not manure at all if a good fertile pasture could be procured for a vineyard. He had made a great mistake in manuring his vineyard—the vines now always grow too luxuriantly. He said that Dr. Grant had recommended a mode of trenching and manuring that cost *fifteen hundred dollars per acre*, and it was all money thrown away. The Delaware might require some surface manuring applied in fall. Some ashes, occasionally, would be useful; but it should not be excessive. E. Moody of Lockport, agreed fully with G. Ellwanger, and thought it was a fatal error to manure vineyards. —— Quail, said he commenced with manuring the soil, but he had since became convinced that this was the wrong course—he would not even use barn-yard manure. On the highest and poorest ridges of his vineyard, the grapes were the best and most abundant. Manured vines grew luxuriantly, but did not bear so well. Good surface cultivation should be constantly given. In preparing a border, for *house grapes*, some of the members stated that they used manure abundantly, with liquid manure added, but the most experienced grape raisers in the open vineyards were of the opinion that the two modes of culture required opposite kinds of treatment, so far as manuring is concerned. J. Salter said he had found that the roots of house grapes would never enter the flesh of dead animals, until it was perfectly decomposed—they would either turn away, or cease growing toward it. G. Ellwanger said a great detriment occurred in attempts to overcrop the vine, Black Hamburgh in particular. Sometimes two crops are spoiled by a single attempt of this kind. [J. Salter exhibited wood of the Ontario and Union Village, but members were unable to perceive any clear and distinct difference. He also exhibited Crevelling, Logan, and Taylor's Bullit. The first was excellent, the second tolerably good, and the third barely tolerable.] C. Downing added to his former remarks, that he had obtained the Ontario and Union Village from various sources, had fruited them repeatedly—and they always proved identically the same.

Fire Blight.

J. Harris of the Genesee Farmer, stated that Dr. Berkley of England, the great cryptogamic botanist, had discovered that minute fungi had destroyed green-house plants, and he expressed the opinion that the fire blight here resulted from a cryptogamic plant, in its ravages in this country. The subject excited much interest and a good deal of discussion, and was commended for further investigation.

C. Downing said that fire blight was no new thing—that forty years ago his father's orchard was more severely affected than he had ever seen any since—that some trees had to be repeatedly cut back, while in others it had been checked at once. P. Barry said that one of the best remedies to prevent permanent disaster was to plant two trees whenever one died—that by pursuing this course when they had lost largely by this disease, they had without difficulty kept up the full numbers of all their orchards.

Peaches for Market.

H. N. Langworthy said that more money could be made on late peaches than on very early ones—that they could be more safely marketed, and sent to longer distances without loss. The best very early sort was Serrate Early York—next Crawford's Early, which he thought the most valuable of all peaches. The Geo. IV, Large Early York, Kensington, &c., had ceased to bear well; the crops were killed and they had become unreliable. The best substitute for all these is Cooledge's Favorite. The next, a rather late sort, is Oldmixon Freestone, but of late it has become unreliable as a bearer. The Late Crawford, an excellent fruit, has nearly ceased bearing; has run out in this climate. E. Moody agreed with Langworthy in some sorts, but would like to show him his Late Crawfords—they are very large and fine,—he had lately measured a peach that was ten and a half inches in circumference. He would plant at least one-half of an orchard with Late Crawford, although usually a moderate bearer. With most kinds, a great error is committed by not sufficiently *thinning out the fruit*—the trees are injured when allowed to overbear, and the fruit is far inferior in quality. The present year he had received a dollar and a half for his thinned peaches, while a neighbor, without thinning, received only from three to four shillings, (one-fourth to one-third,) while the amount of the crop was about the same in both cases. The thinned and large peaches could be picked in far less time—one man had picked 80 baskets of peaches in a day. He manures only as the trees advance in age. He thinks after trees have borne three years, it is best to pull them up, and plant new. [In reply to an inquiry, he said he had a fine stock of trees for sale.] G. Ellwanger, on being inquired what he thought of this frequent planting, said, "I have no remarks to make. I will leave it to Mr. Moody—we have not not many trees for sale!" E. Moody added that the best way to market peaches, was to fit up a car with shelves, to receive the baskets, instead of placing them in piles, as when sent by Express, by which they become badly bruised. H. N. Langworthy said that boxes were usually regarded as best, as obviating the necessity of shelves; to which Moody rejoined that boxes were only preferred because they admitted piling, but the best of all ways was to place them in baskets on shelves.

[For the Country Gentleman and Cultivator.]

EXPERIMENTING IN BEES---No. 3.

Two objects were particularly desirable to obtain:

1. The greatest amount of honey. It is not an object to keep a large number of bees if little honey is secured, and one colony giving 37 lbs. annually, is worth more than twenty giving none, but simply living from year to year, unless there is market for the bees themselves. But twenty swarms giving 37 lbs. each, would give for the trifling outlay quite a handsome sum; and a hundred colonies would afford a handsome income.

2. The honey secured should be the earliest gathered, and best from white clover. Honey from white clover is as much pleasanter than honey from buckwheat, as maple syrup is pleasanter than West India molasses, and in market is priced accordingly.

3. An increase of colonies by the will of the proprietor, at a time best calculated to subserve the foregoing objects.

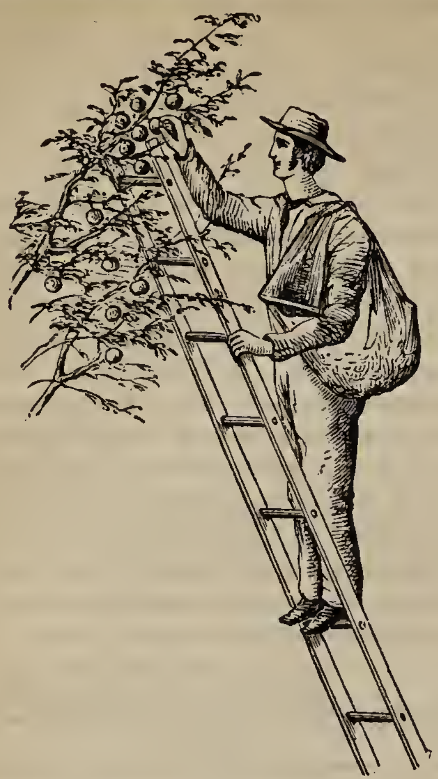
4. Early in the progress of my experiments, I thought it very desirable to secure the means of as near a perfect inspection of the bees in the hive as could be secured.

To secure the above objects, I have so prepared my hives and boxes as to give ready ingress to them; and boxes in sufficient size and number occupying the upper and side chambers to double the capacity of the hive, giving with the boxes about 4,000 cubic inches. With this room, at the commencement of the season, there is but little danger of swarming, and no bees cluster outside of the hive. The whole find employment, in hive, boxes or field; and thus, by storing most of the honey, save that necessary for the brood, in the boxes, they are filled in the early part of the season, the second object is secured; the honey is the early gathered and best. Whether an average of 37 lbs. every season of white clover honey from every June swarm, and 20 lbs. from each July swarm, would meet the anticipations of skillful apiarians, I do not know; but it has been somewhat gratifying to me in my ignorance, feeling my way along, by experiment. Starting without bees, my swarms have been purchased, and have paid the expense of the purchase by the first year's honey.

To secure the increase of colonies if desired, when desired I have so prepared my hive as to secure at will, with trifling trouble, an equal division of the swarm, comb, brood, and honey.

I have secured the fourth object, inspection of the swarm, by glass covered by doors front and rear, by an inclined adjustable bottom-board, and by glass boxes, thus subjecting to inspection almost the whole work. JASPER HAZEN.

Albany, N. Y

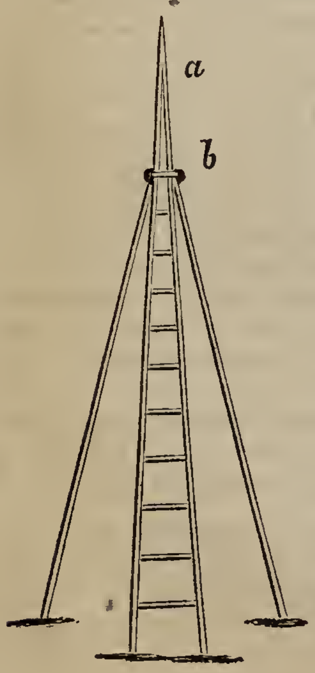


A GOOD APPLE PICKER.

We have tried a number of experiments with different kinds of fruit pickers—baskets with hooks, baskets on poles, canvass tubes, &c., but we find nothing so convenient and perfect as the one represented in the annexed cut, for at least nine-tenths of the crop, if suitable ladders are provided. For the remaining tenth or twentieth, the pole and sack represented on page 225 of current volume of Country Gentleman, is best for reaching the ends of branches and other inaccessible places.

The simplicity and cheapness of the fruit-picker here figured are a strong recommendation. It is merely a common grain-bag, with one corner of the bottom tied to one corner at the top, and slung over the workman's left shoulder. A stick, sharpened at each end, and about a foot long, props the mouth open, leaving a triangular opening, into which the apples are thrust as they are picked from the branch. The way in which the lower and upper corner are most conveniently tied together, is by placing a small stone or pebble in the lower corner, (to form a sort of button,) and then passing the bag strings around closely above it, and tying them firmly. A piece of stiff leather, buttoned on to the shoulder, serves to protect it from becoming sore if the picking is continued several days.

In most cases the operator may stand on the ladder, and use *both hands*, thrusting the fruit rapidly into the open mouth of the bag, which is gradually raised up a little over the shoulder as it becomes filled. Over half a bushel may be placed in it at a time, without becoming inconveniently heavy, and the time for filling it once is not usually over five minutes.



Fruit gathered in this way is less liable to become bruised than when baskets are used, or in any other way; and when the bag is filled it may be placed on the very bottom of a barrel in emptying, without that rattling and contusion caused by inverting a basket.

A common light ladder will enable the operator to reach nearly every part of the tree; and a standing ladder, as in the figure, will render nearly all the ends of the branches accessible.

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PROTECTION FROM THE CURCULIO.

A New-Jersey correspondent (C. of Morristown) furnishes the Country Gentleman with a remedy for the attacks of the curculio, which may be cheaply and easily applied, and which, if future trials shall prove as successful as the one he details, will prove of great value to all growers of fruit subject to its attacks. He says:

"Experience has demonstrated with me that gas lime (which can be obtained at any coal gas works) is a sure protection from the attacks of the curculio. I commenced scattering it among and upon several plum trees, while in bloom, and continued the application immediately succeeding a rain, until the fruit had attained sufficient size and hardness to resist the attack of the insect. On the trees thus treated (Aug. 4) I found only three plums stung, while upon the trees adjoining and contiguous thereto, and not treated with the lime, nearly all the fruit was stung. From the trees thus treated we gathered a large and excellent crop—from those not treated, we gathered none; the fruit did not mature."

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[For the Country Gentleman and Cultivator.]

A SUGGESTION ABOUT POTATOES.

Do not our farmers, as a general rule, save the present crop of potatoes at the expense of the future? Without discussing or expressing an opinion as to cause of the potato disease, is not the reflection that the *earth* is the *natural bed* of the potato, worthy of consideration in reference to the preservation of this crop? What would be the effect upon succeeding crops if it became the custom not to dig the potato in early fall, but allow the crop to remain in the mother earth until the frost admonishes us that winter is about to turn the key in Nature's lock, and fasten up earth's treasures in its icy folds.

For the last four years I have pursued that custon—only digging for daily use, or for market as required, and allowing the crop to remain in the ground until long after the fall rains, and even until frost has hardened the upper crust of the ground, and I have yet to see a diseased potato in the cellar. It may be that they rot; if they do, it is while they are in the ground, and better rot there than in the cellar. C. *Morristown, N. J.*

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[For the Country Gentleman and Cultivator.]

Good Crop of Onions.

Eds. Co. Gent.—I have just learned from Mr. Benjamin Huntingdon, that he has gathered 626 *bushels* of onions of superior quality, from *three quarters of an acre of land*, the present season—which is a very good product for any season, but remarkable at this time, giving assurance that there may be still hope of growing the onion to advantage. J. W. Proctor.

South Danvers, Mass.

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Youth and the lark have their song for the morning, while age and the nightingale have theirs for the evening

[For the Country Gentleman and Cultivator.]

Winter Management of Breeding Ewes.

Messrs. Editors—Commencing with that breed that is best adapted to your locality and wants—first, every fall weed your flock by throwing out the poorest ewes, and fat them, replacing them with selections from your ewe lambs; in so doing you will annually raise the value of your flock to a very great per cent.; and, unless you can resist tempting prices for your best breeders, you will not succeed in your vocation.

Breeding ewes should be kept in open sheds facing the south and east, and at the same time be protected from the searching winds from the north and west.

Separate them into yards of 25 each of coarse wools—35 of middle or 50 of fine wool.

Feed not less than three times a day—twice a day with hay, and once with grain; grain in straw, or roots, according to your facilities.

I feed my ewes twice a day with good hay, and once with unthrashed oats—(the straw after being picked over in racks goes for bedding the sheep,) at the rate of an average of one pint per day through the winter, commencing with a gill or half pint, and gradually increasing it as the ewes near their time of lambing, at which time it should reach a pint or more, according to the size, age and condition of the ewes.

I do not believe it pays to thrash, and much less to grind oats for sheep, unless it be for a few days in spring, when first turned to grass.

Twice a week I omit the oats, and in its room feed roots, (but in excessively cold weather feed their usual oats,) thereby preventing the stretches, which disease is comparatively unknown in England, on account of turnip feeding.

Formerly I lost from one to three per cent. of my sheep every winter with this disease, by reason of confining them on dry feed, but latterly have not had a case.

Oats is the best grain for breeding ewes, as it develops the frame-work of the lamb, or in other words is a bone and muscle growing feed, while corn or oil meal is best to fat sheep; and such food would grow in the undeveloped lamb an undue amount of fat, in proportion to the frame-work or bone and muscle of the lamb.

Lambs from ewes excessively fed on fat-growing food, will be deficient in bone and muscle, and literally loaded with fat at the expense of bone, muscle, and wool, and not possessed of sufficient strength to ever stand.

The complaint of oats fed to breeding ewes, as injurious to their lambs, is "more cry than wool."

An acquaintance feeds a bushel of oats per day through the winter to 27 ewes with good success. This spring he raised from 20 of them, 32 lambs. If he had fed the same amount (not of measure, but amount of nutriment,) in oil meal, I would venture to say not one of the lambs would ever have got up, they would have been so loaded with fat, with weak bone, and comparatively no wool.

Sheep will habituate themselves to stay where they are fed, so feed in dry weather in the yard, where they can get exercise, pure air, and the sun. The latter is as necessary for the health of an animal as it is for a plant. In stormy weather feed in racks, either stationary around the ends and back side of the sheds, or movable ones in the centre.

Salt should be constantly kept before the sheep, in a box nailed to one corner of the inner side of the sheep-shed, and if your sheep are ticky, mix sulphur at the proportion of one-third to two-thirds salt, but good feeding is a sure preventive. Ticks will not thrive on fat sheep.

Keep your breeding ewes well bedded with straw, and by all means remove the manure from the sheds as often as there is a thaw in the winter, as the ammonia from sheep, and especially of horse manure, is positively injurious to them, and though disease may not appear in the ewes, yet it will count on their lambs.

We would earnestly recommend feeding at regular intervals. Order and regularity is as beneficial to the lower animals as to man.

Especially feed the ewes well while the ram is serving, so as to start a vigorous germ, and keep up that feed, or the growing germ, instead of growing with their growth and strengthening with their strength, will when dropped, though possessed of good size, be deficient in vigor and vitality.

Use none but strong and healthy rams of good age, avoiding, if practicable, a ram ramb or an aged ram; and feed him liberally on nourishing and bone and muscle roducing feed, but not excessively on fat-producing feed.

Separate the ewe from the ram after being served. From 25 to 40 ewes is enough for each ram.

I know of a case last season, where one ram was permitted to run with 110 ewes; the last flock of 25 lost 36 per cent. of their lambs—they had not strength enough to get up, though from ewes strong and in good condition.

We could mention a party in an adjoining county, whose spirit of improvement for purchasing imported South-Downs we heartily commend, but who the first season permitted his ram to serve 200 ewes, thereby producing a family of Downs deficient in size and vigor, leading parties to suppose such breeding to be a fair representation of this deservedly popular breed of sheep, thereby seriously injuring the breeding of Downs in that section and surroundings for the next generation.

Seed animals of all kinds should, if practicable, be acclimated before being used. Last year I rented a ram imported the same season, and not one of the 25 ewes he had access to, proved in lamb by him, though elsewhere he had proved himself a sure getter. We learn that quite a per centage of the mares in this vicinity, served last season by a seed horse not acclimated, proved not in foal, though he was reliable elsewhere.

If you wish to have large and strong ewes, do not breed from them till they are two years old.

By all means select the best rams you can find, even if your unprogressive neighbors laugh at what may seem to them extravagance in you.

Remember the price you pay for a good ram is not what he is worth for mutton and wool, as estimated by an unprogressive farmer, but for the present and prospective good he is capable of producing in your flock, according to the amount of purity of blood, or purity of breed, which you wish to infuse into your flock.

Stanstead, Canada East, Sept. 29. GEORGE BACHELDER.

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A $3,000 Smoke House.—We met with an intelligent and economical gentleman at the State Fair at Rochester, who had just built a *three thousand dollar smoke house*. He was induced to do so for the following reasons: Finding, many years ago, that the habit of smoking tobacco was injuring his health, he discontinued the practice, although it cost him many a severe effort. He was subsequently encouraged, however, at the pecuniary saving it was constantly effecting. By an accurate arithmetical calculation, he ascertained that the daily cost of segars, with annual interest, and compound interest, that is, with the interest placed out again on interest, would amount to over three thousand dollars in twenty years. Having already effected this saving, he concluded to build a handsome dwelling. His friends often inquiring, "How can you afford to build so good a house," he invariably answered, "This is my *smoke-house*—the amount I have saved in not puffing $3,000 to the winds."

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Skunks vs. Rats.—Mr. Gregory of Marblehead, Mass., in the N. E. Farmer, expresses the opinion that rats and skunks will not occupy the same barn together. We cannot see as his experience *proves* it, though it has a look that way. We are quite sure that skunks have failed to drive the rats from our barn; or if they have, that they are returning since it has been filled with our grain crops. Rats and mice unaccountably leave their haunts, but we have no certainty that they will not return again. B.

[For the Country Gentleman and Cultivator.]

Thorough Pulverization of the Soil.

As a general rule farmers are not yet fully awake to the importance of having the entire soil reduced to a fine powder. Hard lumps of earth, even when they are full of grain-producing substances, are of but little more value in producing a crop than the same amount of stones. The roots of plants cannot enter hard lumps of earth, and before such lumps can be of any real benefit to plants, they must be broken down, mechanically, with some implement, or be dissolved by rain.

In order to appreciate the importance of thorough pulverization of the soil, we need to have a little spattering of the theory of "vegetable nutrition."

How do plants grow? How does the hard soil and dry manure become changed into plants of any kind? These are important questions which every farmer should understand well; and then he would be able to appreciate the importance of more complete and thorough pulverization of every kind of soil.

No soil or manure can promote the growth of a plant—except mechanically—until after it has been dissolved by rain or water, and reduced to a liquid. Dry earth or dry manure cannot enter the roots of plants. Roots of grain, grass and trees feed upon nothing but liquid or fluid. When we apply bonedust to plants, rainwater must first dissolve the little fragments of bone, and carry them along where they will be taken up by the thousand mouths in the little roots of the plants. So with the hard soil, and hard lumps of earth, they must be reduced to a fine powder by some mechanical operation, and then the rain will dissolve the fine particles, thus forming a fluid, which is the food of plants.

When the soil is very lumpy the atmosphere has but a small surface, comparatively, to act upon; therefore plants grow slowly where the entire soil is one complete clod, or is little else but lumps.

These few thoughts lead us to discuss in a practical point of view,

The Philosophy of Plowing.

Were we to interrogate a thousand farmers, "Why do you plow?" the answer would probably be, "For the purpose of rendering the soil more mellow and porous."

This is correct as far as it goes, but the chief object is to reduce the soil to its greatest degree of fineness, or comminution of particles, *mechanically*, so that the rain, or water applied by hand, may readily change the elements of fertility in the soil from a solid to a fluid, in which state only those elements are available as food for plants of any or every kind. Therefore by reducing the soil very fine, by some mechanical operation, such as plowing, its solidity is in a measure overcome or destroyed, and the roots of plants find little hindrance in ramifying throughout the entire mass that has been broken up. And if the roots and little spongioles occupy the entire soil, the ten thousand mouths of these roots are ever open to drink in those substances, which will promote the growth of the plant. On the contrary, if a large proportion of the soil is in the form of lumps, or is turned over in furrow slices of one unbroken mass, the soil is not in the best, nor even in *good* condition to promote the growth of those plants that occupy it.

Now the idea is in plowing to use those plows that will break up the solidity of the soil most thoroughly and effectually. Turning the soil upside down, as if it were a huge slab of earth, does not accomplish the desired purpose, as its solidity is not destroyed, except in a very limited degree.

Every observing farmer knows that when calcareous and aluminous soils are not too dry, nor too wet, if they are plowed with a kind of plow that leaves the furrow-slice on its edge, the pulverization will be about as thorough and complete as it can be made with a common plow; whereas, if such soil be plowed when there is only a little too much moisture, or not quite enough, pulverization is only partially effected, and consequently it is not possible that the crop should be as great as it would be had the pulverization been more complete.

These thoughts lead us to speak of

Fall Plowing as One of the Most Effectual Means for Thorough Pulverization.

After a soil has been broken up, it soon commences to run together again, and to *set*, very much as mortar does, which has been made of lime and sand; and to assume a solid and almost organized form. In this process almost every particle of the soil that has been plowed is moved, more or less; and much of the soil is separated and moved several inches from those parts, with which it has long been in contact. This operation is effected by rain and sunshine. As a matter of course, this change in the position of the particles of the entire soil, does much towards securing thorough pulverization.

Frost-freezing and thawing of a soil, exerts a very important influence in securing the complete pulverization of all soils. But when a soil has been plowed several months before the time of frost, it becomes consolidated, and the frost will not exert half the influence, in its more thorough pulverization, that it would were it but recently plowed.

For this reason, plowing early in autumn—where thorough pulverization is the chief object—will not be as effectual as late plowing, or even plowing in the winter. If the rains and frosts of winter can be in operation, when a soil is running together, after it has been plowed, the pulverization will be more thorough and complete than it would be under any other circumstances. And more than this, the more complete the pulverization is, the longer that soil will remain mellow and porous; and consequently, the greater will be the available amount of fertilizing matter in that soil, which will promote the growth of crops.

Thorough Pulverization Impracticable without Under-Draining.

Where there is an excess of water in the soil, the particles run together so readily, and set, like mortar, that the most thorough comminution of the soil, by any mechanical process, will be of but little advantage to a crop, when compared with the benefits arising from the same pulverization, when there is just moisture enough to cause such soils to pulverize easily, and remain so for a long time.

There is little or no danger of rendering a clayey soil too dry by thorough underdraining, as it will retain by absorption all the moisture that is required for the healthy growth of plants, even directly above the drains. Therefore, if the superabundant moisture is removed in under drains, and our heavy soils plowed well, as they ought to be, late in autumn, and then plowed again the following spring, the pulverization with be most thorough and complete; and the crops of grain will be increased many times, to double the amount which they have been accustomed to produce.

The *first* step then towards thorough pulverization of our heavy calcareous and aluminous soils, will be *underdraining*. The *second* operation will be fall-plowing, followed by plowing in the spring or summer, when there is just moisture enough in the soil to cause it to crumble well as it is plowed. And the *third* process will be, *manuring*.

All of these things combined will constitute a renovating system of agriculture; and will render the soil more productive from year to year, and at the same time will require less labor to cultivate a given crop.

Auburn, N. Y. S. EDWARDS TODD.

GOOD APPLE TREES.—The *Maine Farmer* says: "Long experience has shown that an apple tree that stands near an old *wood-pile* always grows thriftily and bears an abundance of apples, as the fine slowly-decaying chip-dirt forms an excellent manure for apple and other fruit trees."

THE CULTIVATOR.

ALBANY, N. Y., NOVEMBER, 1862.

☞ There is little left us to add to the condensed but comprehensive notes of our associate, Mr. Thomas, published in this number, as to the character and merits of our State Fair.

Taken as a whole, it would have been creditable in any year of national prosperity. Its main features were the display of Sheep, bearing witness to the increased attention now devoted by our Farmers to this class of Stock, and that of Fruits and Flowers, affording evidence not only of an abundant year, but also of increased horticultural taste and knowledge. But the exhibition of Horses was also one seldom if ever excelled: Gov. Seward's Arabians, particularly the younger one which has for the past year been in charge of President Cornell, attracted great attention; and the several classes of Matched Horses were worthy of particular note. And the Cattle, although scarcely a fair representation of the best herds in the State, in the most prominent breeds, were out in fair numbers, and would compare favorably—with but few exceptions—with the Society's previous Exhibitions. And when we consider the immense contest upon which the thoughts and interest of the whole State are centered, and the uncertainties which in the minds of many appear to have prevented the customary preparation for such an occasion,—the Show of last week can hardly fail to prove a most welcome surprise, both to those who attended it, and to those who could not do so and who will here or elsewhere read the account of its really triumphant success.

For, superadded to the perplexities of the times, came the cloudy skies and almost continual rains of a regular "equinoctial." The weather record of something like forty years which had been consulted before appointing the time of the Fair, and which showed that the week decided on was the week of all others marked by the smallest rain-fall, proved false to us in the hour of our need, and the autumn storms, delayed during several weeks of most delightful weather, set in at last on Tuesday morning, with a north-east wind, which never shifted until just before the "clearing up shower" of Friday afternoon. Up to Wednesday night the receipts had been smaller than for the same period at any Fair for five years past, and there were no signs of improvement for the morrow. Thursday opened as gloomily as ever, with the chimney smoke sinking down over the eaves of the houses, instead of floating upward. But the number of those determined in any weather to be present, proved greater than we had dared to hope, and on that day the grounds must have been visited by more than thirty thousand people. The total receipts of the week were about $11,000.

It is useless to discuss what "might have been," under the favorable auspices of more propitious skies. But every probability goes to show that cool, bright, pleasant weather would have filled the Society's treasury as it has never been filled before, unless at Buffalo in 1857, and Albany in 1859. In no other place, perhaps, could such a succession of forbidding days have been thus happily encountered; and this not so much, we are inclined to think, from the general attendance of its citizens themselves, as from the populous and prosperous country with which Rochester is surrounded. The rain is a far more formidable obstacle to city people on such an occasion than to Farmers, and on this account, as well as owing to the distance from the city at which the grounds were located, we may safely put down a large part of the success of the Fair, pecuniarily, to the credit of the thousands who went thither from all parts of Monroe and the neighboring counties, rather than, as has sometimes been the case, to any unusual influx of visitors not expressly concerned in the cultivation of the soil.

We therefore regard the pecuniary success of the Fair as peculiarly a matter of credit to the farmers of the State.

Nothing was heard from Rev. Dr. Breckinridge of Kentucky, who was to deliver the Address, which affords conclusive proof that, if not captured by the rebel forces in that State, he has at least been cut off either from escape or communication beyond their lines.

Dover Potatoes.—We are indebted to Albion Ransom, Esq., of this city, for a basket of Dover potatoes from his summer residence in Watervliet. They are of medium size, light red color, and nearly round, and of superior quality, coming from the oven or steamer nearly as dry and white as flour. Mr. Ransom informs us that he procured the seed at Newport, R. I., and that they yielded ninety-five barrels per acre last year.

Harvesting Beans.—A correspondent of the Rural New Yorker gives his mode of stacking and drying beans as follows:—"I use two stakes instead of one, seven or eight feet long and from one and a half to two inches through. Set them in the ground about two inches apart; put a withe on the stakes a foot or eighteen inches from the ground; take a small handful of beans, and lay the roots between the stakes, so far through that the tops will not reach the ground; then a bunch the other side in the same way. After this, the *roots* only should come between the stakes, and the roots of each bunch should be laid *at right angles with those of the bunch preceding.* When within a foot of the top of the stakes, put on another withe, drawing the stakes together to hug the roots closely, then fill up with beans, as before, to the top; then take two bunches of beans, tie the roots together and lay astride the top, and it is finished. Beans stacked in this way will never mold, as they often will when stacked around one stake. They should be stacked as soon as pulled, and always handled by the roots. When the stacks are thoroughly dry, they may be taken to the barn whole, pulling the stakes from the ground."

Manuring Wheat.—In answer to the question, "What time ought soils for wheat to be manured?" the *Ohio Farmer* says: "It is usually best, if a large supply of manure is applied, to manure the previous crop. By this means it is thoroughly incorporated with the soil, and has time to become well decomposed. If it is quite rotten, it may be applied previously to the fall plowing; or, if it is thought best, apply it to the surface after the plowing. The wheat ought to have the advantage of the application during its fall growth. If the roots are well set before winter, there is little danger from winter-killing, and the plant, in spring, is ready to make a rapid growth. Heavy manuring of wheat at the time of sowing, with crude manures, is not advisable."

☞ Farther testimony is given in our last foreign mails to the value of the Thorndale blood. "Another high—and what is better still, a thoroughly honest—average has been added to Short-Horn history," says the Mark Lane Express, in opening its account of the sale of Mr. HALES' herd at North Frith, Sept. 24th. Mr. H. was the purchaser last year, it will be remembered, of the "4th Duke of Thorndale," sent to England by SAML. THORNE, Esq., at 400 guineas (say $2,000); and his wisdom in paying such a price has now been fully vindicated in the results of his own sale. The 4th Duke it seems, was started at 200 guineas, and ran up rapidly, between the bids of Capt. Gunter and Lord Exeter's agent, until he was finally knocked down to the latter at *four hundred and ten guineas*—in other words, Mr. Hales has had more than a year's use of the bull, and disposes of him now for $50 more than he paid Mr. THORNE in 1861.

There were also sold at the same time several calves sired by "4th Duke," as follows:—

HEIFER CALVES.

2d Kentish Gwynne,	calved	Feb. 15, 1862, for	41	guineas.
Heiress,	do.	June 4,	64	do.
Perfection,	do.	July 19,	35	do.
Concord,	do.	Sept. 20,	16	do.

BULL CALVES.

Athelwald,	calved	May 12, 1862, for.......	26	guineas.
Marmion,	do.	July 17.....................	155	do.
The Friar,	do.	July 15,....................	26	do.
Faustus,	do.	July 23,....................	50	do.
Clifford,	do.	Aug. 16,....................	30	do.

Here are nine calves, the average age of which on the day of sale, according to our computation, was only 2 months 25 days, sold at an average price only a small fraction less than 50 guineas each, or very nearly $250.

There were 22 head of other females sold—including young and old, and all but four of them calved in 1860 or previously—which brought an average price per head of about 56 guineas—one of them, "Moss Rose," by Marmaduke out of Cambridge Rose 6th, going for 245 guineas. Excluding her the average for the other 21 is lower than that for the four young heifers sired by "4th Duke." Of the bulls, beside 4th Duke and his five calves, there were four sold at an average of 43 guineas each. But in referring to the prices at which the cows were sold, it should have been remarked that 14 of them had been served by "4th Duke," which would of course have added considerably to the prices they commanded.

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THE REV. DR. BRECKENRIDGE of Kentucky, who was to have delivered the Address at our State Fair, but from whom nothing was heard, and who, it was feared, had been carried off by the rebels, is now said to be safe at or near his own home in Danville, the rebels who have possession of that part of Kentucky having protected him from harm.

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A NEW GRAPE.—A correspondent in Columbia county furnishes an account of a new seedling from the Rebecca —which he says bore *forty bunches* of excellent blue grapes, the second year, and now grows with extraordinary vigor and bears abundantly, the fruit possessing qualities of the highest character. We can only repeat in relation to this grape, what we have had to do in the case of other fruits, claimed to be new and of great merit, but which we have never seen—that the rules of Pomology require at least two years careful examination of any new fruit, by *competent pomologists*, before it is worthy of recommendation—to which we may add that several years more, with experience in different localities, are generally required to test its value, such experience often quite reversing a fine reputation. In no instance can we recommend a new sort on the simple statement of a correspondent, who may have been imposed upon by another, as we have recently known in some striking instances. We do not, however, pronounce this new grape an imposition, only we want more time, experience, and personal evidence.

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NEW WORK.—Mr. J. F. WOLFINGER of Milton, Penn., who has recently delivered a course of lectures on agricultural matters at the Pennsylvania Ag. College, to the great gratification of the students, as we learn from one of them, proposes to issue a work entitled "The Science or Philosophy of Farming," in an octavo volume of 700 pages. Dr. PUGH, in a note which has been sent us, says that from his examination of the manuscript and from hearing the lectures above alluded to, he is prepared to say that "Mr. W. has succeeded in bringing together, into compact form, a very large amount of valuable practical and scientific matter in relation to the subject of Agriculture. It is treated of in a manner adapted to the education of the farmer and practical man, and as such recommends itself to all those devoted to Agricultural pursuits."

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☞ We regret to learn that our old friend, H. P. BYRAM, for many years editor of the "Valley Farmer," and who has for some years past spent his summers at Sag-Harbor, L. I., was so severely wounded by the bursting of one of Gen. James' projectiles during an experimental trial of them at Sag-Harbor last week, as to render the amputation of one of his legs necessary. At the same time Gen. James was so severely wounded as to cause his death the next morning.

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LARGE PEAR.—We have received from the Rev. Dr. WELCH, a Duchesse d'Angouleme Pear, grown on his fine place at Newtonville, which weighs one pound and three ounces.

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MAINE POMOLOGICAL AND HORT. SOCIETY.—The Annual Meeting of this Society was held in Augusta, Oct. 7, when the following officers were elected: President, C. Spaulding; Vice Presidents, one from each county in the State, as follows: R. Martin, J. P. Perley, R. Eaton, J. C. Weston, John Rogers, G. H. Freeman, S. F. Dike, S. W. Colburn, W. D. Dana, Sidney Perham, C. Chamberlain, Horace McKenny, S. Wasson, H. Russ, Wm. Wilson; Recording Secretary, Samuel Titcomb; Corresponding Secretary, J. M. Meserve; Trustees, Warren Percival, N. Foster, E. Rowell; Committee on Fruits, S. L. Goodale, F. Wingate, D. A. Fairbanks, Alden Rice, Albert Noyes. The display of fruit was small in extent, but of superior quality.

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☞ We learn from JOHN HAROLD, Esq., Secretary and Treasurer of the Queens Co. Ag. Society, that their late Fair was a decided success, the receipts being about $4000, which would be good in times of peace, but eminently so in war. Nearly all the Fruits and vegetables were donated to the Soldiers' Hospital in Lexington Avenue, N. Y., and were joyfully received.

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HIGH PRICES FOR SHEEP.—The Middlebury (Vt.) Register informs us that S. W. Remelee of New Haven, recently sold to H. Hemenway of Whitewater, Wis., his stock buck for $500. Also that Mr. John L. Buttolph of Middlebury, sold to Mr. Sweet of Hoosick, N. Y., a yearling buck for three hundred dollars.

Engraving of the Fair Grounds.—We publish on page 253, a sketch of the State Fair Grounds at Rochester, engraved for the *Rural New-Yorker*, for the use of which we are indebted to brother Moore. If it is anywhere deficient, it is in not showing the presence of a *larger crowd;* but it gives a tolerably correct idea of the location of the buildings as already described in our columns.

Mr. Moore has the following just remarks upon the success of the Fair, all of which we fully endorse :—

The State Fair.—The sun was visible but a few hours from Tuesday morning until the close of the Fair on Friday, and more or less rain fell on every day of the exhibition. And yet the Fair was a grand success—an unparalleled triumph in all respects, considering the unfavorable weather and condition of the country. The result is the more gratifying from the fact that many had predicted a failure, even with fair weather, and had seriously urged a postponement. Under the circumstances the Agricultural Society and people of the Empire State may well send cordial greeting to brother Producers and Unionists of the Loyal States, and also cite Secessionists everywhere to the result—as evidence that New-York can not only do its full share towards suppressing rebellion, but also exhibit undiminished zeal and energy in maintaining and advancing her home interests. Had the weather been favorable we doubt not the Fair would have proved the most successful *in every respect*, ever held in the State—and that is equivalent to saying in the Union.

New-York County Fairs.—In Warren county, the Fair is declared to have been a "success," the attendance being large and the show respectable.——The Montgomery Fair was held at Fonda, and the interest in it was less than on former occasions.——The Fair of the Susquehanna Valley Society at Unadilla, was well attended, the exhibition good, and the officers and public well satisfied.—— In Orleans county the Fair is said to have been one of the best ever held in the county.——In Queens all departments of the exhibition were well filled, and the result highly gratifying to all concerned.——In Ontario, the exhibition proved more successful than was anticipated, the show of stock of all kinds, though not as large as on some previous occasions, being of superior quality. The receipts were about $850.——In Essex the entries were less numerous than in former years, though the quality of the articles was deemed superior to any former occasion.—— In Delaware, the Fair seems to have been well attended, and to been about as satisfactory as usual.——The County Fair in Cattaraugus, as we were informed by a friend, not only paid all its premiums and expenses, but also reduced considerably the debt of the Society incurred in previous years.——Another friend tells us that the same is true of the Allegany County Fair.——The Duchess County Society appear to have met with the usual degree of success, judging from the list of prizes awarded.

Deaths.—Mr. William Reid, the well-known nurseryman of Elizabeth, N. J., died at his residence in that city, after a brief illness on the 3d inst., aged 58 years. Mr. Reid had an extensive acquaintance among horticulturists throughout the country, by whom he was highly esteemed for his genial temper, intelligence and integrity, and who will deeply sympathize with his afflicted family.

The Hon. Adam Furguson of Canada West, alike distinguished as an agriculturist and politician, died recently of apoplexy. Mr. F. was formerly a regular attendant at our State Fairs, and was held in high esteem by all who made his acquaintance.

Inquiries and Answers.

Planting Maple Seed.—I have a question to ask—when is the proper time to plant maple seed? Kansas. [Plant in autumn on light dry soil, and cover the surface with leaves, moss or muck, till spring—or keep the seed in slightly moist peat through winter and plant in spring. They will grow best treated in this way, but usually many will grow planted in spring without this care.]

Pear Seed —What quantity of pear seed is necessary to plant an acre—the rows two and a half feet apart, and the seed economically used? The soil is a deep rich loam—the condition and preparation as good as can be made Would fall or spring planting be preferable? If the latter, how should the seed be prepared, and at what time put into the ground? I. N. S. [There would be nearly half a million seed in a bushel—an acre would have about 1,000 rods of rows—the seed, if all good, might be sown at the rate of 20 to a foot (and thicker, as a portion is defective) or 3 or 400 per rod—hence it will be seen that a bushel would about plant an acre, if the seed were all good and grew well But in common practice, many seed are imperfect or defective ; many do not grow ; and many plants dwindle and perish after coming up—two or three bushels, therefore, would not be too much for good seed. For bad ones, we can make no estimate.]

Root Cellars above Ground.—I notice all kinds of plans for houses, barns, etc., but none for *root houses*, or cellars above ground. A reliable cheap plan, safe against any cold winters, would be desirable in this region, and probably many parts of the west. We have very few hills and the soil in this locality is of such a nature that unless a cellar is drained, it is sure to have water in it in spring. J. H. O. *Wisconsin.* [Root cellars may be easily made above ground, that will afford sufficient protection to roots through winter—the requisites being thick, non-conducting walls and roof. These walls may be made of different materials, according to circumstances. When lumber is abundant, posts may be set, enclosing the space desired for the roots, and another parallel row to form a double wall. If straw or forest leaves are used for filling in, the space should be two feet—if sawdust or chaff is used, one foot will do. Board up these posts, and ram in dry straw, (if chopped it will be better,) dry forest leaves, &c. A sloping or double roof should be made on rafters with boards, and second rafters placed a foot and a half or two feet above. Then fill in between them with straw or leaves. If chaff is used, the space need not be so great as for straw ; and if the leaves are dry and smoothly placed, a foot thickness will do, as they form layers or strata, with thin enclosed plates of air, and are very good non-conductors of heat (or cold.) Then cover the whole with a board roof, to throw off the water, and the building is complete. A door, made double and similarly stuffed, admits the roots. When lumber is scarce, build a double log structure, and fill in the space as before—or if the stuffing should be scarce, build a single wall, and bank up heavily with turf or earth. The roof may be made of poles instead of boards, laid closely enough to hold the leaves or straw ; but the water soaking in, will soon rot it, and it must be renewed. The bottom should be made of poles, a foot from the ground, so as to admit ventilation from below, to keep the roots dry, allow air to circulate among them, and to allow the soil from them to fall through between them. There are many modifications that might be made ; but the main essentials are to be preserved, viz., to allow the warmth to pass up from the earth below, and to shut out cold from the sides, but more especially from the *roof.*]

Soiling Cattle.—I should like to see published in your valuable paper, a treatise on soiling cattle—the kind of crops used, time to sow, the proper succession, in order to have at all times a plentiful supply of green food—the number of cattle kept upon a certain quantity of land, the manner of feeding, &c., &c. I think a communication from persons familiar with the practice would be acceptable to many.

Applebachville, Bucks Co., Pa. H. C. D.

Bees —I should feel much indebted, if through the medium of your valuable journal, I could be informed as to the best mode of smothering bees. The way in which I did it formerly, was to dig a small hole in the ground, large enough to place a tin plate, upon which I put a piece of tinder sprinkled over with some dry sulphur, set fire to it, and then placed the hive over it. But the difficulty about this operation, is the want of ventilation, causing the fire to quench before the bees are stupefied. A Subscriber. *New Brunswick.* [By putting sticks under the corners of the hive so as to raise it an inch or so from the ground, the difficulty would probably be obviated]

CLEAN CELLARS.

If we were asked, which should be the finest apartment in the house, we should probably answer, "Not the parlor, not the drawing room, but the cellar." There are two reasons for this answer. First, a bad, dirty cellar appears to combine the idea of all that is repulsive—damp, offensive, musty, putrid air—rotten apples, rotten cabbages, rotten potatoes, rotten boards—the effluvia creeping through every open window and open door, and through the cracks of every closed window and closed door, into all parts of the house—into the kitchen, into parlor and dining room, into sleeping apartments,—and laying the foundation of sickness and fevers. Secondly, a neat, well lighted, marble-floored, whitewashed cellar, combines a good deal that is pleasant. One room may have in it a supply of sweet butter and milk, and in another excellent apples and delicious melting pears; the food that is placed on every table is known to come from this model cellar, where every thing is pure and clean.

Does some one now say, "I can't afford to make such an expensive cellar!" We reply it need not be expensive. The walls are already built—give them a smooth neat plastering, and then a handsome whitewashing. Have new windows put in if necessary, and keep them washed, bright and clean, with an iron-rod grate in the window frame, or wire netting, to exclude intruders when the windows are open. Cover the floor with water-lime cement—first thickly and coarsely with a grout made of water-lime and coarse gravel, and then with a smooth polished finish of water-lime and clean washed sand. The whole cost of the plastering of the walls, the whitewashing of the same, the new windows, and of the marble floor, need not be forty dollars for a moderate sized farm-house. Save this sum by reducing the use of tea, sugar, coffee, omitting the plating on that new harness and carriage, and discarding all tobacco. If there should be any surplus, get a neat set of apple shelves made, standing on scantling legs, one shelf above another, so that one can pass all around them, and have them all neatly painted; and also procure a set of potato boxes or bins, with covers to exclude light, and have these all planed and painted.

It is a good time of year, now, to get the cement floor made, and whether it is made or not, it is absolutely essential that every dirty cellar be now thoroughly cleaned out before storing any of the new crop of fruits and vegetables; and in cleaning out, if the work is not thoroughly done, it may be best to sprinkle over it occasionally until it is well purified, a pound or two of chloride of lime, as a smell-destroyer and disinfectant.

PRESERVING TOOLS FROM RUST.

No farm tool or implement, any part of which is of rubbed or polished iron, should be put away without first thoroughly cleaning. It will not only last longer when kept clean and bright, but will be more convenient and efficient in using. A hoe or a spade cast aside covered with earth, will become rusted, and be scarcely fit to use. The mould-board of a plow should be always bright. To leave one in the furrow, exposed to the weather, and where it will inevitably become covered with a thick coat of rust, is a miserable practice But in damp climates or damp seasons of the year bright tools will sometimes become rusted after housing. In such cases a coating of some suitable substance should be rubbed over them, if laid aside for any length of time. A good and cheap coating for this purpose is grafting wax, softened by an admixture of an equal part or more of lard. Beeswax is good, but rather too hard and too expensive. Add to it four times as much lard and twice as much rosin, and the mixture will be a good one. Or, three parts of lard and one of rosin, will answer a good purpose. The lard should of course be fresh, any portion of salt attracting moisture. The mixture should be melted; and if the tool could be heated as hot as boiling water, all the better. Much hotter than this the temper might be injured if of steel. Put on as thin a coat as practicable to prevent waste, and rub with a cloth. All polished metal, when examined with a microscope, is found to be covered with scratches and furrows, and it is these furrows that retain the mixture and preserve the coating securely until used again.

PICKLING ONIONS, &c.

Please give me a recipe for pickling onions and red cabbage, and oblige A Subscriber. *Wash. Co., Ill.*

Not knowing how to make pickles, we applied to a notable housewife, who says, "for pickling red cabbage, cut it up and pour over it boiling hot vinegar which has been seasoned with salt and pepper." On inquiring what proportion of vinegar, and of salt and pepper, she replied, "enough vinegar to cover it, and any woman will know how much salt and pepper will be enough to season it"—from which we infer that the quantity must be *guessed at.* To pickle onions, Beecher says, "peel, and boil in milk and water ten minutes, drain off the milk and water, and pour scalding spiced vinegar upon them."

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[From the Tribune, Aug. 2.]

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Navy Department, Washington, Sept. 17, 1862.

J. T. Lloyd—Sir: Send me your Map of the Mississippi River, with price per hundred copes. Rear-Admiral Charles H. Davis, commanding the Mississippi squadron, is authorized to purchase as many as are required for the use of that squadron.

Oct. 9—w3t—m3t. GIDEON WELLES, Secretary of the Navy.

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This First Premium Wine Grape has been thoroughly tested in Lat. 43° for 20 years by many cultivators and found to be hardy, vigorous and productive; it makes a high colored rich wine. Strong vines sent by mail for 50 cts. each. Large deduction by the quantity. From $5 to $100 may be made by any local agent without leaving his home. Agents wanted. For liberal terms, and wholesale and retail Catalogues of the Lyons Nurseries, address

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Oct. 9—w2t—m1t.

1863 THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS. 1863

NO. IX---FOR 1863.

The publication of the NINTH NUMBER of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, for 1863, has been somewhat detained for the completion of a very full and valuable Treatise on Entomology, including those Insects about which there is now the greatest desire for general information, from the accomplished pen of the State Entomologist, Dr. ASA FITCH. We are happy to say that this article is now in the hands of the printers, and that the ANNUAL REGISTER will be ready for issue about the 20th of October. Meantime orders will be received and registered as usual, and at the usual rates:

Single Copies Twenty-Five Cents.

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And at these prices the ANNUAL REGISTER will be delivered, either by mail or otherwise, free of charge, to any part of the country. If purchased at the office in any quantity over one dozen, a reduction will be made equivalent to cost of transportation. For still larger quantities for sale by agents, more favorable terms will be given. ALL ORDERS to be accompanied by CASH.

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2. Estimate for a Farm of One Hundred Acres.
3. Causes of Disaster.
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II. MANUFACTURE OF MAPLE SUGAR—SEVEN ENGRAVINGS.
1. Sap Boilers.
2. Evaporators.
3. Processes of Collecting and Boiling the Sap.

III. BEST WAY TO BUILD A HOUSE—FORTY-EIGHT ENGRAVINGS.
1. Introduction.
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2. Rules for Making Cheese.
3. Rules for Management of Cows.

V. RURAL ECONOMY—SIX ENGRAVINGS.
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2. Screwing on Nuts—Leaky Roofs—Horse Fork—Painting.
3. To Avoid Running out of Hay.
4. Highways—Lightning Rods—Osier for Bands—Tape Line in the Cornfield.
5. Forest Leaves for Litter—Good Smoke House—Corn Marker—Scalding Tub—Harvesting Peas.
6. Chain Pumps—Irrigation—Draining—Clean Land.

VI. FRUITS AND FRUIT CULTURE—FOURTEEN ENGRAVINGS.
1. Autumn and Spring Transplanting.
2. Dwarf Apples.
3. Rules for Tree Planters.
4. Systematic Formation of Pyramids.
5. Two Native Plums.
6. Sending Buds by Mail.
7. Shortening in the Peach.
8. Construction of a Cheap Grapery.
9. Gooseberries.
10. Time for Pruning Orchards.
11. Fruit versus Malaria.
12. Dwarf Cherries.
13. Strawberries—Quick Returns.
14. Pruning the Quince.
15. Select Lists of Apples.
16. Labels for Fruit Trees.
17. Select List of Grapes.

VII. INSECTS BY DR. ASA FITCH—THIRTY-FOUR ENGRAVINGS.
1. Definitions of Terms, &c.
2. Descriptions of Orders.
3. Insects which Injure Fruit Trees.
4. Insects which Injure Grain Crops.
5. Insects Injurious to Gardens.

⁂ To show how full and valuable an article this is, it may be mentioned that Six Insects injurious to Fruit; Thirteen injurious to Grain, and Six injurious to Gardens, are described with complete and new Illustrations, engraved expressly for this article in the ANNUAL REGISTER. It forms, in point of fact, the readiest HAND BOOK OF ENTOMOLOGY for the practical use of the farmer and gardener, we have ever seen.

VIII. NOTES ON NEW AND DESIRABLE FLOWERS—TEN ENGRAVINGS.
1. Double Zinnia.
2. Japan Pinks
3. Bidens Atrosanguinea.
4. Cuphea Limapani—The Striped French Marigold.
5. Dwarf Nasturtium—New Sweet Williams.
6. Dwarf Convolvulus—Oenothera Camarkiana—Splendid Gazania.
7. Lychnis Haageana—Whittavia Grandiflora.
8. Calleopsis Cardaminifolia—The Gaillardias.

⁂ This article was written for the ANNUAL REGISTER with Drawings and Engravings expressly prepared to accompany it, and not before published in this country, by JAMES VICK, Esq., of Rochester.

IX. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price, and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

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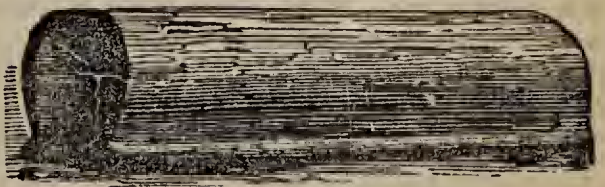

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J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

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COMPLEX MACHINERY.

In recently looking over the various implements and machines at the New York State Fair at Rochester, we were never more forcibly impressed with the truth that *simple machines are a success, and complex ones a failure*, other things being equal, or the machines having a fair share of merit otherwise. As always occurs on such occasions, a number of contrivances were exhibited, the ingenuity of which, the inventors seemed to think, depended on the curious arrangement of a great many parts. There was a water drawer, as an example, so complex, that it was quite a trade to learn how to manage it. There were several churns, encumbered with gearing, and some curious combinations of perpendicular and horizontal, and rotary and reciprocating motions; but while all of them would doubtless make good butter in good hands, if they did not churn it too rapidly, it is hardly probable that they would stand ten years of service and come out with so good a reputation as the old dasher churn or Kendall's simple barrel.

There are several conditions to the rule that simple machines are valuable, and complex ones failures. It may be laid down however, as nearly universal, that any machine requiring a hard strain or irregular severe work, *must* be simple. The plow is of this character. There is a constant pressure when it is at work, of several hundred pounds, and this pressure is constantly fluctuating, and sometimes very suddenly increased by a large stone. Nothing but a simple affair would stand this pounding and knocking, and jerking and relaxation of force. Convert the plow to a complex machine, and it would soon be bent or broken or deranged by such severe usage. This is the reason that Pratt's Ditching Machine proved a failure, although working well while every part remained unbent and uninjured. Rotary digging machines will probably share the same fate, for the same reason.

But there are some complex machines that succeed well—the locomotive on the railroad, for instance. But it must not be forgotten that the cost of making a single one, strong enough, is sufficient to buy a good two-hundred acre farm, in some of our best farming regions—and that a locomotive, instead of being subjected to the irregular and jerking obstructions that impede plows, glides over a road built expressly for its transit, and almost as smooth as glass. An occasional block of granite on the track or stick of timber, if repeated a few hundred times daily, would make short work of the best fifteen-thousand dollar engine.

The mowing and reaping machine is rather complex, but yet it will run for years—is not this an exception? No—for it must be observed that the obstruction which it has to encounter, is soft grass or straw, through which the keen edges of the blades run like a hot knife through butter—the process is totally different from that of the share of a plow finding its way among stones and hard soil. Besides, the mowing machine, although consisting of many parts, is simple in operating, consisting essentially of the vibrating motion of a single serrated knife.

Any locomotive plow, for these reasons, will be difficult in practice. A fixed locomotive, working long horizontal cables with plows, involves so much machinery, that it is doubtful whether it will ever be brought into long-tested, profitable practice.

A harrow and horse rake may not seem simple contrivances, because consisting of many parts; but they are both essentially quite so, for those different parts are firmly secured together so as to form one solid piece. A curry comb, and a hair brush, although having hundreds of teeth, are really but one part, in their use.

We often admire the simplicity of the crowbar and handspike—implements that will be in extensive and poular use, as long as human muscles exist, and labor is essential to human existence and comfort. The nearer, therefore, that every new invention approaches these admirable and time-honored contrivances, the more likely it will prove valuable, be widely adopted, and descend to posterity.

◆

USE OF FISH MANURE.—At the recent State House discussion on manures, reported in the *N. E. Farmer*, several members spoke of the use of fish manure. Mr. Howes of Marshfield, said Daniel Webster spread fish upon his land, but it burnt up the soil and brought a prodigious lot of flies. Mr. Davis of Plymouth, said the remedy for this was composting—otherwise, on light soils, fish would burn up all the vegetation. Mr. Hood of Somerset, had used fish as a manure—the flies they drew only annoyed people out of doors; they never entered the house. The subject is one deserving more attention from sea-side farmers.

EXAMPLE IN AGRICULTURE.

"If men are to be made intelligent," says Henry Ward Beecher, "give them specimens of intelligence." And he illustrates this influence of example as follows:

> Let a man go into a village where the houses are all going to decay, where the fences are all tumbling down, and where no pains are taken with trees and flowers, and build a neat house, and enclose his grounds with a good fence, and tastefully decorate his yard with comely trees and beautiful flowers, and his example will be a blessing to the place. It will not be three years before there will be twenty neat houses, with good fences, and yards decorated with trees and flowers, as the result of his judicious outlay of means. The taste of the whole village will be educated and improved by the influence that he will exert through the instrumentality of the advantages which he possesses over them.

We have observed the same thing in agriculture. When a thorough practical farmer goes into a neighborhood of "worn out" farms, and engages in the work of reclaiming and improving his new purchase, his success is sure to awaken a spirit of inquiry, and his example can but exert an improving influence upon all who witness or hear of it. He is seen to grow better crops than his neighbors on a soil which has been comparatively sterile heretofore, and the methods pursued are sought out by those around him. It is found that he does not grow crop after crop of wheat, corn or grass on the same field, but he grows good crops of these products upon different fields in a series of years, entering at once on a system of rotation. He introduces new and improved varieties of grains and seeds, the products of which are seen at a glance to be better than those commonly grown—at least they command a better price in market. The same is true of his orchard and garden. Better fruits and finer vegetables are introduced, such as at once attract the attention of the observer. The improved breeds of live stock with their better care and feeding, cannot fail to gain the notice of all around him. With improved plows and other implements of tillage he accomplishes a more thorough cultivation of the soil, giving a deep and mellow seed bed, insuring the crops against the excess of drouth or moisture, and bringing abundant crops despite "the season" so unreasonably complained of by the careless farmer. But as the real basis of improvement he is particularly careful in making and saving manure, seeking in every way to increase the fertility of his soil—to feed his crops, that they may produce large and profitable returns for his care and labor. An example of clean culture is also given, and it is seen how much more the soil can do for the farmer's crop if no self-sown intruding weeds are allowed to rob it of its proper sustenance.

These improvements, and many others we might particularize, as remarked before, exert an influence on the farms of those who witness or hear of them. Their owners may cavil for awhile, but the unmistakable signs of prosperity—of the paying nature of the new system of management—will generally influence the most incredulous into some sort of an imitation, which is nearly always followed by better returns, encouraging further progress—and thus the work goes on until the whole neighborhood shows the influence of the example. In this way, and by the constantly recurring lessons of an enlarged experience, a better system of culture has been in part introduced, and thus also diffused and extended.

Those who learn by hearsay, we remarked, are also influenced. The agricultural fair has its part in this teaching; but its great apostle is the newspaper, filled in large part by the writings of experienced and skillful farmers, who can not only tell how to work profitable results, but draw their illustrations from their own experience. Though no period in the history of agriculture has been without its examples of productive farming, at no period, on the broad acres tilled by American industry, have so many bright spots shown out to gladden the hearts and encourage the hands of the friends of improvement. As much room as there evidently is for advancement, a comparison of farming now with that of even ten years ago, shows marked progress. May it go on until *thorough work* shall make our land teem with golden harvests, with the finest flocks and herds in the world, with peace, plenty and universal liberty and intelligence.

[For the Country Gentleman and Cultivator.]

EARLY EXPERIENCE IN FARMING.

Messrs. Editors—I have several times thought I would give you an account of my first crop in the United States. I came on this farm the 31st day of October, 1821. The manure made in the cattle-yard had never been taken out of it, or any part of it, from the time the buildings were first erected. I immediately engaged a man with his horses and wagon to draw out manure at 8 cents per load, I helping to load. I gave ten acres a very heavy manuring. I then thought manure ought to be plowed under as soon as spread, and I hired another man, his team and plow, to do that job for one dollar per acre. Next spring I got a pair of good horses, pulverized the plowed land pretty well, and sowed barley, the year (1822) being about as dry a season as we have had since. My barley was nearly a complete failure.

One gentleman who had told me at the time I bought the land, that it was entirely worn out, and it was impossible that I could live on it, said, when he saw the crop of barley—"Did'nt I tell you so? This land will never pay tillage for any crop." Another, who had told me after I bought it, I should name the farm "Hard Scrabble," as I would have a hard scrabble if I made a living on it, when he saw the barley, said he thought it proved all he said of it. I felt no discouragement, however, as I well knew that owing to the dry season and the manure being plowed under, the barley derived no benefit from the manure. Had I left the manure on the surface through winter, and plowed in spring, I have no doubt the crop would have been much better; or if I had again plowed it in the spring, and turned up the manure so as to have mixed it with the soil by the harrows, it might have been still better.

After I took off what barley I could get—(it was so short I could not cut it all with the scythe)—I plowed it as shallow as I could, and harrowed thoroughly. When we got showers the barley vegetated. I then plowed as deep as it was plowed the November previous, turning the black rotted manure up, and sowed with wheat; and the crop was an excellent one—about as good as any I have since raised.

I also summer fallowed about eight acres, and sowed it with wheat; it also was a fair crop, but I could not afford to hire help enough to get manure on it, else it would have been as good as the other.

These were my two first crops—the one nearly a total failure; the other excellent.

People told me my land would not raise corn; so I planted little the two first years. But all that is required on this land to raise excellent corn, is dung and a thorough pulverizing of the soil before planting, and keeping it thoroughly pulverized as long as a horse and cultivator can go between the rows. That is the secret of raising corn here. My corn is very good this season, and I think generally so in this neighborhood; but all crops are good. I understand barley is turning out pretty well. Very little sown in Western New-York. I never raised much barley, but have raised more for a few years past. Oats lodge so badly with me now that it makes them an expensive crop to harvest.

Peaches, pears, plums apricots, and grapes, have been a very abundant crop here, but the peaches on my farm were much later in ripening than usual—say from two to three weeks. We have had ripe grapes for some time.

Near Geneva. Oct. 2. JOHN JOHNSTON.

◆

[For the Country Gentleman and Cultivator.]

Plowing Wet Grounds in the Fall.

As farmers cannot complete all their underdrains in one year, nor usually in ten years, there is a mode of plowing wet fields in autumn, which will improve very much the friability of the soil, and thus be the means of producing a much larger and better crop the next season, than when plowing is performed in the usual way.

The first consideration is to lay out the lands for plowing, up and down the slope, as nearly as may be. The slope is sometimes in a diagonal direction across the field, and sometimes a field does not all slope in one direction. But where the ground is decidedly wet, the lands should be up and down the slope, so that the middle furrows may carry off the surplus water more readily than they would were they made *across* the slope.

When wet land is plowed *across* the slope in late autumn, the surplus water will be retained in a great measure, by settling across the lands, from one middle furrow towards another, by which the soil will be kept well saturated, and sometimes completely flooded with water.

In case a field should slope gradually from two directions, and form a shallow valley, the true way would be to plow a land in the lowest part of the valley, and then let the middle furrows of all the lands, up and down the slope or slopes, empty into the main middle furrow.

Now that the work is laid out, the next step will be to execute it. If the ground is sod ground, the plowing should be performed—if it be done with a single plow—with lapped furrow-slices, and not with the furrow-slices laid flat. And more than this, the plowing should be done in narrow lands—not more than sixteen or eighteen feet in width. Then, after every land has been finished, adjust the plow for running as deep as the team can draw it, and cut the middle furrows six or eight inches deeper than the rest of the plowing.

After this has been done, let the middle furrows be shoveled out, so as to form a free channel for the water, and let the earth which is shoveled out, be spread evenly each way from the middle furrows, over the ridges.

One active man with a good round pointed shovel will shovel out a long line of such furrows in a day; and the good effect upon the crops next season where wet lands is treated in this manner, will amply remunerate for the labor bestowed. This kind of work can be performed when the weather is so unfavorable and cold that workmen can do little or nothing else to good advantage.

Manuring Meadows.

I believe that manuring grass land late in autumn is no longer a subject of doubtful expediency among our best farmers. Well conducted experiments have proved that it is far better to keep manure housed, and apply it, as a top-dressing, late in autumn to grass land, than to apply it in the spring of the year, even if well rotted. Coarse barnyard manure applied as a top-dressing to grass land in the spring will not increase the crop half as much as the same manure would increase it, where it spread evenly over the surface in the fall.

The true philosophy of this matter is here. In autumn everything tends downward into the earth. Grass, stubble, leaves, and all such substances, return back to the soil. The temperature of the weather grows cooler and cooler almost every day; and the various grasses in the soil do not rise to promote vegetation as they do in the spring of the year. Therefore when manure is applied in late autumn almost the entire strength of the manure is carried down into the soil, and there retained as food for plants until the next spring, when new life of plants begins, and long and warm days increase the temperature of the soil; and thus those manurial substances—gases and salts—which promote the growth of plants, are brought up to the surface of the soil, and taken up by the roots of whatever is allowed to grow upon the soil.

But when manure is spread on the surface of the soil in the spring of the year, only a small proportion of the salts and grasses of the manure ever enter the soil; but they are swept away upon every breeze, and almost wholly lost in their efficacy on the crops of him who claims those substances as his own.

I have observed for many years past that they who spread their manure on the surface in the spring of the year, promote the growth of their neighbors' grass about as much as they do their own; while, on the contrary, those farmers who spread their manure in the fall, or in November, derive all the benefit that the manure can impart in heavier and better crops the next season.

A thin sprinkling of the scrapings of the barnyard and sheds applied in November to grass land will often increase the crop to more than twice the usual amount. This I have often tested, and have never known it to fail.

On the contrary I have never been able to perceive but little benefit from manuring grass land in the spring. I have my mind on the meadow of a neighbor who gave one of his meadows a heavy dressing of good manure last April, and I watched it until the grass was mowed, and I am compelled to acknowledge that I could perceive little or no benefit at all arising from the top-dressing. The grass was very light, and yielded, as I judged, not more than one and a half tons of hay per acre. Had that quantity of manure been applied in autumn, no doubt the grass would have yielded more than three tons of hay per acre.

Auburn, N. Y. S. EDWARDS TODD.

◆

[For the Country Gentleman and Cultivator.]

NOTES FROM LEVI BARTLETT.

The Vetch or Tare.

Mr. Cornell, in his letter published in Co. Gent. of Sept. 18th, has something to say of the vetch, a plant much grown in England for soiling, and to be fed off by sheep preparatory to the wheat crop. I have read much in the English agricultural papers about the culture and use of the vetch or tare, but have never seen the plant till this season. Last spring I received a small package of seed from the Patent Office, marked "large seeded vetch from France." The seeds were black, in size and form about like a middle sized pea. The seeds were sown in drills, came up, and made a fine growth. They are a straggling, pea-like plant, growing to the length of four or five feet; the stems are stiffer and much stouter than the largest kind of peas. The seed has ripened well. Judging from this French specimen of the vetch, I think it a plant that might profitably precede the wheat crop, especially if fed off by cattle or sheep in July and August. Also a good soiling plant. Mr. C., in speaking of the rape plant says: "The top of the rape resembles the top of the Swede turnip—the root that of the radish." I have grown the rape several years, and from seed derived from different sources, none of which had roots like a radish, but all had very large, strong and long roots, like the cabbage. Mr. C. is right about the plant not surviving our winters.

The White and the Yellow Lupin.

I have grown both of the above named Lupins. The seeds of the white variety were obtained from the land of the Pyramids. On good soil they grow to the height of four or more feet, with a stiff, woody stem, half an inch in diameter, with a branchy top, producing clusters of pods. The yellow lupin does not grow so tall, and throws out numerous branches from the base of the main stalk. It is a much more bushy, leafy plant than the white. It is the yellow lupin that is so extensively grown in many portions of Germany for green manuring. From the limited knowledge I have of the two kinds, I should give the yel low one the preference. The summer season is not quite long enough to perfectly mature the seeds of the lupin here in New-Hampshire. The time may come when it will be profitable to extensively grow the lupin, as in Germany, for the purpose of enriching our light sandy lands.

The English Bean.

When Mr. Webster returned from his visit to England, more than twenty years ago, he procured a large variety of Agricultural seeds for distribution. They were left at the seed store of Joseph Breck, Esq., Boston, for distribution. Among other seeds Mr. B. forwarded to me, was one quart each of four varieties of English beans. These were planted in drills. A portion of the land was dry, gravelly soil; the other part a moist, stiff, black soil. The plants on the dry portion of the field were nearly a failure, while on the wetter portion they grew well, but I came to the conclusion they were far less profitable than our native beans, so did not repeat the experiment. I have occasionally received a package of the English bean from the Patent Office, but they do not succeed well here. This season I planted a few drills of two varieties, viz.: The White Flowering Marsh and Seville Long pod beans. But very few of the pods on either sort have ripened, and if they do all ripen, they will not yield so largely as many of our large colored kinds do. Many of the plants were for weeks as lousy as some of the secession soldiers were that fell into the hands of our troops. And here I will just hint to Mr. Newton of the Ag. Bureau at Washington, not to purchase any of the English beans to send North—they won't pay. Neither the beans or the fodder are as valuable as are those (and their like) that were grown here by the Indians, long before the discovery of the country by Columbus.

Potatoes.

They are rotting somewhat badly among us—more so I think, than for several years past. Levi Bartlett.

Warner, N. H., Sept. 30.

[For the Country Gentleman and Cultivator.]

COW MILKER.

L. Tucker & Son—Observing an inquiry in the number of the Co. Gent. for October 16, from a correspondent at Deerfield, Mass., about the patent cow milker, I reply that as agent for the manufacturers I have been selling these cow milkers occasionally, during the past season, and expect to have the "*improved machines*" which received a premium, and attracted so much attention at the late International exhibition, for sale in good season for the early spring trade.

It was only a short time before the patentee left this country to attend the exhibition, that he perfected the "cow milker" so as to be able to recommend it with entire confidence.

He took with him one hundred machines, which after a most thorough trial in the best cheese and dairy districts of England, proved an entire success. The patent was sold, (the United States only being reserved,) for $25,000 cash, with a royalty of $5.00 on each machine to be made and sold.

Between four and five thousand were disposed of before one of the partners left, the other one remaining a short time to superintend for the purchaser of the patent the manufacture of 10,000 milkers.

This patent cow milker, rather ridiculed at first, with the inquiry "what is coming next?" having passed the ordeal and close practical examination and trial of thousands of farmers in the best dairy districts of England, may be now considered a fixed "American institution."

It consists of a simple but fixed attachment on the side of the regular milk bucket, the India rubber valves of which, operating by simple suction, are worked by a couple of levers with the two hands, till the last drop of milk is drawn from the udder. The teats are inserted in India rubber tubes or cups, which are adjustable, to suit different udders. It is contended that the milk is drawn out more thoroughly than it possibly can be by hand, and also with more ease to the cow, and in a shorter time.

There has been cases where unruly cows, who would not stand to be milked by hand, quietly submit to this last scientific process, which puzzles them a little at first, but before recovering from their surprise their milk is all drawn into the bucket.

It is well known that many fine cows are ruined by bad milking, and the extreme difficulty of procuring good milkers is felt by every dairyman. This invention, therefore supplies what every farmer wants, and it is the intention to have them manufactured on a large scale, so as to supply every section of the country. Paschall Morris.

Philadelphia.

[For the Country Gentleman and Cultivator.]

EXPERIMENTING IN BEES---No. 4.

In recapitulating, it will be observed that the five June colonies have sent out but two swarms in the three seasons That is equal to but one swarm from six colonies.

From the six July colonies, but one swarm has issued in three years; being one swarm from thirteen colonies. I think had those hives been supplied with boxes at the commencement of the season, they would not have sent forth swarms. They had been at work some time before boxes were supplied. From these facts inferences may be drawn of the probabilities of swarming, if supplied in season with a full suit of boxes, by others as well as myself. These facts should, however, be considered in coming to a conclusion. The July swarms commenced the season weak, from causes named in a previous communication, (p. 223,) and one, beside the hive swarming, gave no surplus honey. But all have filled their hives with comb, and I think have sufficient winter stores. But I purpose to ascertain by weighing them, and if either appear to be short, to supply the lack.

As previously noticed, the June swarms have done the best, they having each given, on averaging, 37 pounds of honey each season, while the average from the July swarms has been but 20 pounds each season. But I can see no reason now, why for another season they do not promise as well as the June swarms.

Most of the honey being from white clover, has readily sold for 25 cents per pound; which is $9.25 for each June swarm each season, and $5 each season for each July swarm; or, at 20 cents per pound, $7.40 for the June and $4 for the July swarms. The average of both June and July swarms each year, at 27 1-5th pounds, at 25 cents, nearly $7. Aggregate of the eleven swarms 705 pounds, at 25 cents per pound $176.25.

I know no reason why eleven new swarms, in any section equal to this for bee-pasture, should not do as well, with the same hives and treatment. Twenty-five new swarms issuing from the 18th to the 28th of June, should give 925 pounds, worth at 25 cents, $231.25.

The care taken of my bees has only been the common care that farmers usually take of their bees. To hive them and set them in their places with the boxes on in the order desired, and occasionally as curiosity prompted, my own or that of others, to take a look within by removing the back door and see how they were progressing, both in the principal hive and in the boxes. This visit will be somewhat frequent where you can see the whole progress of the work, and see that they are progressing finely, and that without in the least disturbing the bees in their labor.

Some object to glass covering the front and rear of the principal apartment. That may be omitted if desirable, and the principal hive be enclosed with firm boards—still centrally divisible, and all the advantages secured, except the inspection of the principal apartment. I think no one making the trial I have in the experiments made, would fail to make the improvement, and the trifling expense would be covered at once. I would again invite friends desirous to examine the claimed improvements, to call at 168 Third-street, Albany, or on the Delaware Turnpike, three-fourths of a mile from Lydius-street. Jasper Hazen.

RYE CONVERTED TO CHESS.

I have been an attentive reader of the articles in your paper, in reference to wheat and rye turning to chess. I will state a fact: In July, 1861, desiring to try an experiment of sowing rye with buckwheat, which I have seen do well and be remunerative, I sowed about four acres with rye and buckwheat. My crop of buckwheat was gathered and yielded well. The rye crop, in about two weeks after, looked well and promised fair.

In September I sowed another lot of six acres with rye, the same seed.

Last spring in looking at the rye upon the buckwheat stubble, it presented a strange appearance, and at the proper season a better crop of *chess in head*, no farmer need have desired. Three-fourths of the field was chess. This was cut green,—fed to the cows, and was eaten with avidity.

The rye sown in September, was reaped and gathered in season, and was free from chess.

Another fact under my observation: It is a custom with our farmers to soak their seed wheat in strong brine—the shrivelled, small and blasted grains, together with foul seed, chess, cockle, &c., float, and are skimmed off.

A neighbor of mine, preparing to sow wheat, in which was a good deal of shrunken grains, but otherwise clean, soaked it in brine, and the shrunken wheat was skimmed off. Finding that he did not have quite seed enough to finish his lot—there being a small angle in a corner, unsown—he sowed this shrunken and shrivelled wheat, and the next year his wheat crop, except this angle, was free from chess, and his corner of shrivelled wheat was a chess crop, free from wheat. C. *Morristown, N. J.*

We give place to this communication, merely to explain how easily all weeds find their way into cultivated crops. A weed is any plant that has small seeds that become mixed with the seed of crops, or otherwise spread in the soil, and that are extremely hardy and spread under adverse circumstances. Out of many thousand native and introduced plants, a very few have become excessively troublesome as weeds, and chess is among the number. The soil may contain millions of minute seed all through it, without constituting a ten-thousandth part of its bulk, and wholly imperceptible on close examination, remaining dormant, as all seeds do, when buried too deep, but springing into vegetation when brought near the surface. Luxuriant crops often keep such weeds smothered down, till some accident occurs to kill the crop, when the weeds spread upward and take the space thus given to them. Hence superficial observers and hasty reasoners think that the plants of the disappeared crop have *actually turned into the weeds!*

The seeds of the chess plant require a million to a bushel,—and ten thousand, or one hundredth of a bushel, would seed an acre, one plant to every two feet square,—as we have often seen them cover a square yard when they had plenty of room to grow in. These ten thousand seed would constitute but a two-millionth part of the soil, and would never be detected till growing. The seeds are also very hardy, and may be scattered in manure, and many other ways. They will grow and bear a few seed when less than six inches high, under a dense growth of wheat and rye, but when any thing happens to kill the crop, these little plants spring up and spread in wild luxuriance. Knowing these characteristics, any one could have known *by reasoning beforehand*, that cases would continually occur among careless farmers, where they would think their crops had changed to the weed—or to any other weed that would alike take its place. Such cases are accordingly occurring daily—they are reported to us very often; and we have no doubt that there are at least a thousand of our readers, and perhaps many thousands, who have often heard just such statements as the one here given by our correspondent. Keeping in view the character of the chess weed, and its readiness to usurp the place of an injured and destroyed crop, there will not be the slightest difficulty in accounting in several different ways, for its abundant appearance, whenever poor, shrivelled or worthless seed is sown; or having started, has been destroyed in any way. It is needless to spend time and space upon the subject, and we are surprised that after it has been so repeatedly and satisfactorily explained, just such cases as we have heard at least one thousand times, should be so often repeated.

PRAIRIE SCREENS AND HEDGES.

M. L. Dunlap, of the Chicago Tribune, states that he has seen a perfect prairie fence or hedge made of the white willow, (called also grey willow,) the cuttings of which were put out in 1853. The cuttings were placed one foot apart, the soil dry and rich, just above overflowed flats. The trees are now forty feet high, and are sufficiently close to exclude all horned stock and horses, and only to allow the passage of small pigs, lambs and calves. The trees are six inches in diameter—form a fine screen against winds, and are estimated to "produce nearly or quite a cord of wood to the rod." After the cuttings were set out, they received horse cultivation, but we are not informed for how many years. To stick them out and neglect them, or allow cattle access to the trees while they are young, would be entirely useless, and would of course end in failure. F. K. Phoenix, (who has an especial abhorrence of all humbugs,) in a late Prairie Farmer, expresses his entire confidence in this tree for screens and hedges for prairies, provided it is rightly treated, namely, 1st, by preparing the ground in the best order; 2d, by obtaining a *good stand;* and 3d, by keeping the cattle away from it for several years, as they will browse it.

The willow here spoken of is the species so well known in Europe and extensively grown for timber, known to botanists as the *Salix alba.* In a letter received last year from Charles Downing, he says, "The best willow for timber, hoop poles, &c., is what Dr. Grant calls the "Beveridge willow," (the proper name I do not know,) but the *purpurea* is best for hedges—cattle are not so apt to eat it, and it may be so woven together as to be almost impassable." The extreme bitterness of the bark and leaves of the Salix purpurea prevent cattle from touching it; and the very tough and flexible shoots may be interlaced in any desirable manner. Loudon says that in Norfolk, Suffolk, and in some parts of Essex, England, it is used for plaiting into low close fences, for the exclusion of hares and rabbits, which will not touch the shoots, and that a fence of this kind is reckoned but little inferior to that of wire." The Beveridge willow, of which we have trees growing from cuttings received of Charles Downing, if not the old *Salix caprea*, is certainly very nearly allied to it, and perhaps merely a variety,—although, in a genus containing over two hundred species and some of these running into many varieties, it is hard to speak with confidence.

These remarks are made, not for the purpose of positively recommending any of these willows for hedges, but for the encouragement of experiments which may lead to something valuable. While the entire fences of the northern states cannot be a dollar less than five hundred millions, it is well worth while to give some attention to all the possible ways in which the expense may be lessened, and farm barriers made more secure.

EXTENSIVE ORCHARDS IN CALIFORNIA.

Some of our readers may remember the account of the magnificent orchards of G. G. Briggs of Maysville, California, published in a former number of the Illustrated Annual Register—$22,000 worth of peaches were sold in 1857—and 67 peaches weighed 65 lbs. A late number of the California Farmer states, that notwithstanding the disasters occasioned by the flood, which swept away thousands of trees, the crop of Briggs and Haskell this year will exceed any former crop. Seventy men are employed in gathering, yet thousands of bushels will be lost. In the second week of August, from sixteen to twenty tons a day were sent from these orchards, in peaches, apricots, and plums; two-thirds being shipped to Sacramento and San Francisco. Even nectarine trees were breaking down, and the ground was covered with excellent fruit. It appears that where the wash of the flood was only sand, piling it up two to four feet about the trunks did not injure the trees, but rather served as a useful mulching. But where the deposit was soft clay, the trees were killed. This result was to be expected, the former admitting air and ready drying—the latter excluding air, and causing decay.

[For the Country Gentleman and Cultivator.]

CATTLE HERDING ON THE PRAIRIES.

[We transcribe from a private letter the following interesting account of the system of a noted stock feeder of Lee Co., Ill., believing it will prove of interest to the readers of the Co. Gent. The same method is in use in other sections of the West, and is perhaps one of the most economical plans of consuming the products of a farm so as to bring them into transportable shape for distant markets, which can be employed in that section under present circumstances. We are promised further particulars as to the summer care of the cattle herd, from information gathered on a visit to their prairie "ranges" or pastures.—B.]

Within a few years a system of cattle-growing has been practiced in this country, which to some extent changes the characteristics of prairie farming. The vacant lands are now so generally enclosed that the pasture "range" has become too narrow for the stock of the farmer, and this has led the owners of large herds to establish "ranchos" or herding stations on the borders of Inlet and Winnebago marshes, to which are gathered in spring most of the beef and young cattle of this section for pasturage during the grazing season. In October they are returned to their owners, who pay about $1 per head for salting and attendance, thus getting a summer's growth at but slight expense compared with home feeding, the animals thriving equally as well. The farmers following this system are generally such as own from eighty to one hundred and sixty acres of land, from one-half to two-thirds kept under cultivation, in corn, wheat, timothy seed, and the lesser crops.

We cannot give a better idea of this system than by some account of the farm and management of Ira Brewer, Esq., of Bradford. He has about 240 acres of land, nearly one hundred of which are in timothy, which he cuts as early as it is fit for seed, carefully saving the straw as well as that of his large crops of wheat and oats in stacks for winter forage. His cornfield also furnishes a large amount of fodder.

He buys of his neighbors as he can, their one, two, and three year olds, which are kept with the herd in summer as before stated. In October, when the prairie grass is all dead, his timothy is excellent pasture, and here his stock is kept until snow falls, when they range the corn fields or feed at the straw stacks as they choose. At the proper age, Mr. Brewer fattens his cattle for the Chicago market, feeding them liberally with corn in the ear. About sixty hogs follow the cattle to use up all the shelled corn and that voided whole. It is found that hogs do better in this way than if fed good corn in the ear—fattening more rapidly and economically.

This system has its advantages in allowing the profitable home consumption of all the fodder as well as the coarse grains of the farm; in enabling the farmer to keep all the stock the farm will winter at but slight expense per head; and in the large amount of manure thus furnished for keeping the soil in a highly productive state. The expense of marketing the products is far less than in the form of grain, and the prices are generally fully as remunerative. W. H. Gardner.

Amboy, Ill., Oct. 8, 1862.

[For the Country Gentleman and Cultivator.]

Winter Treatment of Breeding Ewes.

Messrs. Editors—In The Cultivator for Nov., page 353, I find an interesting statement by Geo. Bachelder, on the management of breeding ewes during the winter months, in which I most heartily agree, except in the following points: First, Mr. B. says, by all means remove the manure from the sheep-sheds as often as there is a thaw in the winter, as the ammonia from the sheep manure is injurious to them, and although the disease may not appear in the ewes, it will count on the lambs. Now, Messrs. Editors, this is truly a new idea to me, (throwing out sheep manure in the winter,) as I have always supposed that sheep manure must be let alone until wanted for use in spring, as when forked from its bed into heaps it would heat and burn, and thus destroy the most valuable elements of the manure; and as for ammonia arising from the manure to the injury of the sheep, I believe it can be prevented in a cheaper and much better way than the removing of the manure.

I have adopted the following mode of management: Before my sheep come into the barn, I draw a layer of muck, say six or eight inches deep, into my sheep-pens, and this, with a frequent addition of a little straw, soaks up the liquid excretions of the sheep for the first few weeks of winter. I then draw in a layer of sand or dry muck, or both, and this process repeated two or three times during the winter, retains all the ammonia; and I find on entering my sheep-barn on a warm day in winter, the air is purer than when I used nothing but straw, unless I used a great quantity of straw, which is injurious to the manure. The frequent bedding with sand or muck also renders the manure much easier to fork up in the spring—it also will pulverize up much finer, which is very important in the production of crops.

In the second place, I cannot agree with friend Bachelder in the use of oil-meal. Although my experience is limited, I had honestly come to the conclusion that flax seed or cotton seed oil-meal, fed with other grain in part, was the best feed I ever used, not only for fattening but for producing an increased flow of milk, which is quite essential in raising lambs. Last winter I fed cotton seed oil-meal to all of my breeding ewes, with turnips twice a day, in morning and at night—fed but very little other grain, and I must say that my ewes never did better, having an abundance of milk and raising nearly all of their lambs, although they come in February and March, the coldest part of winter—sixty ewes raising about sixty-six lambs—all but 12 of the ewes fine wool—the coarse ones producing twins nearly all of them. I also believe it will increase the growth of wool at least ten per cent.

over other grain, as my flock sheared this year nearly half a-pound per sheep more than last year. This I attribute to the cotton seed oil-meal.

It is also considered that the manure made from sheep or cattle fed on cotton seed oil meal is much more valuable than the manure made from stock fed on other grain. If this be true, it is certainly an important item to look after, as the manure is the life of the farm; without it the farmer may truly say that farming is poor business, or does not pay six per cent. on the money invested.

In regard to sheep running in open sheds—allowing them to run out of doors at will, was, as I supposed, fast being done away with—at least in this part of the country, where the cold blasting storms of winter find their way into our sheds unless shut up on all sides, and double boarded at that. I believe that sheep will, when kept indoors with a plenty of ventilation, penned off, as friend Bachelder says, in pens of 25 to 50, each, (according to grade,) cut more wool, raise more lambs, and keep in better condition on less feed than when exposed to the cold blustering storms of New-England.

What I have said that does not agree with friend Bachelder's theory in sheep culture, I hope will be taken in good part, as I am somewhat interested in the culture of sheep, and am always anxious to learn from those who have had more experience than myself in sheep husbandry.

Hatfield, Mass.. Oct. 25, 1862. J. E. WIGHT.

[For the Country Gentleman and Cultivator.]

Remedy for Foul in the Feet.

Messrs. Editors—In a recent number of the Country Gentleman I noticed directions for curing foul feet in cattle. As I have often cured it by a much more simple and easy process, you may publish my method, if you please:

Dissolve blue vitriol in water to saturation, and daily wet the parts affected. Three or four days will give ample time to effect a cure, provided the feet are kept *clean and dry*, except from the application of the vitriol water.

It is a painful disease, and unless cured speedily, will cause a rapid waste of flesh. E. Marks. *Camillus.*

THE ADIRONDAC GRAPE.

Mr. A. S. Fuller, a well-known horticulturist of Brooklyn, has been to Essex county for the purpose of examining the original Adirondac vine. He reports as follows:

"I went to Plattsburgh, but there learned that the original Adirondac vine was in the grounds of J. G. Witherbee, Esq., at Port Henry, in the town of Moriah, Essex county, about 40 miles north of Whitehall, in latitude 44°. (Mr. W. not being a propagator of fruits, and not attaching much importance to the matter, sometime since agreed to furnish Mr. Bailey of Plattsburgh with all the cuttings, except what he gave to his friends.) The original vine stands about 10 rods up the slope, and about 50 feet above the waters of Lake Champlain. The hills, at the base of which the vine grows, are some 200 feet high, and sheltered on all sides as well as it could be protected naturally, and the valley opening only to the south.

"The soil is a deep sandy loam, intermingled with the disintegrated rock continually washing down from the hills above. Mr. Witherbee says he first noticed the vine in 1852, and, supposing it to be a wilding, or an Isabella, dug it up as he supposed; but the next season a sprout from the old root, or a seedling, came up in the same place, and this was allowed to grow. The following winter it killed to the ground, but the next season it made such a fine growth that he protected it at the approach of winter. The following season it produced fruit which ripened some weeks before the Isabella standing in the same garden. This vine has been laid down and covered every winter since, and has never failed to produce a good crop. The vine at the present time has three shoots from the ground, each of which is about 1½ inches in diameter. They cover a trellis some twelve feet high, and sixteen feet long.

"The vine cannot be said to be trained, although a part of the branches have been tied to the trellis. The leaves are now (Oct. 6) perfectly healthy, there having been no frost to kill them, neither have they been attacked by mildew. The Isabella and several other varieties in the same garden are also perfectly healthy and growing rapidly. The Isabellas are not yet ripe. The vine has every appearance of being an Isabella, both in leaf and wood, with perhaps the exception of the *alæ* of the leaf overlapping more in the Adirondac than in the Isabella. The points of difference are: The earliness of ripening, and the larger size of the bunches and berries, and the lighter color of the fruit. The clusters are more compact, and the berry is nearly round, while the Isabella is oblong. The quality of the fruit is very good, but not rich; pulp very tender, parting readily from the seed. I consider it a great acquisition."

[For the Cultivator and Country Gentleman.]

THE FRENCH PRUNE.

Messrs. Luther Tucker & Son—Mr. Levi Bartlett's paragraph in the Co. Gent. of Oct. 23, in regard to French Prunes, prompts me to say that this delicious fruit grows even in New-Jersey. Among a lot of several hundred choice apple, pear, cherry and apricot trees, which I received in 1853 from Germany, out of the nursery of the Prince of Schaumburg Lippe, I found a dozen prune trees. Having been dug in the middle of November that year, and shipped by a sail vessel, they arrived here when the ground was frozen, and I had to dig a trench for the whole lot, and covered them thick enough with earth to keep the roots from being exposed to the frost. When the ground was settled in March, 1854, they were all planted, and succeeded so well that the loss out of apple, pear, cherry and prune trees did not exceed 10 per cent. My apricots I lost nearly all. Of these dozen of prune trees I saved eleven, about as handsome as can be desired. While all my plum trees are killed with the black knot, which even extends to an alarming degree to the native sour cherries, my imported German cherries show very little of this plague, and not an insect seems to touch my prune trees. Even the locust, so hurtful to my apple and pear orchards, never touched a prune tree. These trees have borne every year since the second of their being planted, and for the last three years more than the supply for my house. This year some of them were almost loaded down with delicious fruit, but showed signs of some rot, caused, as it seemed to me, by the bees eating holes into them before maturity, during the long dry and hot weather. However the daily supply was abundant for a month, and the last picking yielded a bushel of very sound and sweet fruit, a good share of which were used for sweetmeats. Prune trees can stand good manuring; they will survive alongside of a hog-pen or barnyard. However, I think they grow slower in this climate than they would in a more northern or moister region. Their young growth does not winter-kill like peach and other tender fruit trees, and they are long lived. In an orchard on my father's farm in Germany are prune trees now bearing, which were planted by my grandfather over sixty years ago. The prunes were dried in ovens for family or market use. I fully agree with Mr. Bartlett, regarding the quality of this fruit, and would advise every man who can spare the room, to plant at least trees enough for his own use. They can be grafted or budded on plum stock, but I believe stocks raised from the prune pit and budded, are to be preferred on account of their greater hardiness. When the season for budding arrives I shall be happy to supply some brother farmers with a few buds or grafts, if they will inform me how to *cut*, *pack* and *direct* them.

South Amboy, N. J., Oct. 27, 1862. JOHN F. HILLMANN.

[For the Country Gentleman and Cultivator.]

THE VETCH OR TARE, etc.

Messrs. Editors—I notice the remarks in your paper on the cultivation of the English Vetch in this country. Twenty odd years ago, when farming it in Buffalo, on the Niagara river, I experimented with the vetch, as well as many other English products. The summer climate there is nearer that of England than any other I have experienced in the United States; but after repeated culture I gave up the vetch, as being less profitable than clover for pasture or soiling, and the pea for a grain crop. The vetch requires a cool and *very moist* summer, and the *open early spring* of England to grow it to perfection and profit. An early spring and wet summer, and a rich, moist clay or loam soil, might produce a profitable crop here; but a late, dry, hot spring and summer I fear would not—at least my experience proved this.

The best and earliest pastures are winter wheat and rye. By the time these are fed off, orchard grass, clover and ray grass are sufficiently forward for a good bite. Before these are over, early sweet corn will be fit for roasting ears, which is the best and most profitable stage in its growth for soiling; and from this on through the season you can have corn, by planting or sowing it at different periods, and of later or earlier varieties.

The sweet early corn has not so great a growth as many other kinds, but it is enough more nutritious to more than make up the difference of weight and product per acre. Many grow the large southern varieties, because they get a *greater growth of stalk;* but the stalks are so coarse, and so destitute of flavor, that cattle will only eat a part of them; and moreover, you cannot get this variety forward soon enough in our high latitudes to produce even roasting ears, to say nothing of those fully ripe. In fact, it is something like secession, it does not flourish well at the north, though northern early corn like Unionism, produces fine crops at the south.

I have experimented fully with English beans, and came to the same conclusion Mr. Bartlett has on this subject—our own varieties are much superior for the table, and greatly more profitable.

I have experimented also with lucern, and pretty much all these British, French and German products, which are little known, and less grown, among us, and have come to the same opinion which our ancestors probably did who emigrated to this country, and that is, we have superior and more profitable products, which the good sense and experience of our farmers have long settled upon as best for us. Still I am always ready for new experiments, for if one succeeds out of a thousand, the country may be made a great gainer thereby. Sorghum, for example, especially at the West, has proved of great benefit. We find, also, that cotton this season is grown profitably in a higher latitude than it was supposed it could be. I had a beautiful growth of it in my garden nine years ago; even the Sea Island produced blossoms, and it is well worth cultivating as a *rare flower* in our gardens. A. B. Allen.

New-York, Oct. 31.

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[For the Country Gentleman and Cultivator.]

SETTING PEACH TREES.

I put out two peach orchards last spring, setting both with great care. One I mulched, and sowed to spring wheat; the other, I planted with beans, using a cultivator freely, and hoed the trees three times, thus keeping the soil perfectly mellow, using no manure around them. The result is, three times the growth upon those cultivated; the shoots being green and thrifty. While in the other orchard, besides the growth being small, the leaves are yellow, and altogether does not present near as fine an appearance as the other. Both orchards were set on precisely the same quality of soil, and the difference in growth can be attributed to no other cause than that of cultivation. I think there is no other tree that shows a lack of cultivation sooner than the peach. E. A. King.

King's Ferry, Cayuga Co.

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ABOUT CORNED BEEF.

When beef is fresh it contains considerable blood, which is drawn out by the brine. If the meat is left in this bloody mixture, it will require a much larger quantity of salt to preserve it, particularly through warm weather. My plan is to make a brine by using for every hundred pounds of beef, five pounds of salt, one-fourth of an ounce of saltpeter, and one pound of brown sugar. This is dissolved in just enough water to cover the meat, and poured upon it. When it has been in this brine two weeks, I take out the meat, let it drain, pour a fresh brine over it, and then it will be good the season through.

The cook who uses corned beef should not be so ignorant or so indolent as to delay putting it over the fire until an hour before dinner. A good sized piece requires three or four hours steady boiling to do it justice. Insufficient boiling must be made up by extra chewing. Always have the water boiling when the meat is dropped in, otherwise the sweetness will be drawn out into the water. A boiling heat hardens the outer surface at once, and thus keeps in the juices, which give richness, and which contain most of the nourishment. An excellent way of cooking corned beef is to have a large boiler with a wire or wooden rack on the bottom for the meat to rest over the water. When the water boils, place the meat upon the rack and put on the cover of the boiler with a cloth over it to keep in the steam. The heat of the steam will rise above the boiling point and penetrate the meat, and cook it more quickly and better than could be done by boiling.—*American Farmer.*

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Simple Recipes for Making Vinegar.

T. B. Miller of Clayton, Ind., has communicated to the New-York Farmers' Club the following simple recipes for making vinegar:

"Fill nearly full any vessel, jug, crock, pan, tub or barrel, with pure rain or soft water, sweeten it with any kind of molasses, (the quantity is not material,) set it in a moderately warm place, or in the sun, cover with sieve, gauze or net, to keep out flies and gnats. In due process of time it will be vinegar, when it must be put into a suitable vessel and stopped close. To convert cider into vinegar—if made from sweet apples, it is only necessary to set the barrel in a warm place and knock out the bung; if from sour, stir in a little molasses, and when sour enough bung up tight. Vinegar barrels should be well painted, as they are liable to be eaten by worms.

It will be proper to state that it is the action of the atmosphere, which in time converts the sweetened water into vinegar, hence the greater the surface of water exposed to its influence the sooner it will sour. There is a thick scum rises on the top of the vinegar when making, which is the 'mother,' and should not be thrown away."

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A New Tooth Powder.

Dr. Delabarre has been induced to recommend carbonised rye as a tooth powder, from the fact that in all those countries where bread made of rye is the food of the generality of the inhabitants, the latter are remarkable for the whiteness, strength and durability of their teeth. Savoy and the Landes are instances of this truth. Schrader has found 500 grammes of ashes of rye to contain 7 grammes of carbonate of lime, 9 8 of carbonate of magnesia, 7 2 of oxides of iron and manganese, and 1.9 of silica, all of which substances have a favorable effect on the teeth. Hence—and from his own experiments—Dr. Delabarre concludes that rye carbonized and finely pulverized, used daily as a tooth powder, soon stops caries, and promptly cures the small abcesses which are often formed on the gums.—*Galignani.*

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☞ Mr. George Cary of this city, we are pleased to learn, has hired for the season, of Mr. J. C. Taylor of Holmdel, N. J., his South-Down ram "Vigor." Vigor is two years old, and is every way a very superior animal, and worthy of his parentage. His sire was a son of "World's Prize," and his dam a ewe imported from Jonas Webb's flock in 1859. We are glad to see such sheep introduced into our county.

GOOD AND BAD FRUIT.

The remark is often made, that "it is as easy to raise good fruit as bad." This refers to the varieties propagated and planted out. In other words, it is as easy to graft a pear tree with a Seckel and Sheldon, as with a choke pear, or a Colmar d'Aremberg. We may as well raise the Swaar and Northern Spy as the worst imaginable sour and astringent cider apple, so far as the occupation of the ground is concerned. A frost or chicken grapevine will bear no more than a Delaware or Rebecca; a horse plum grows no more readily than a Lawrence, Gage or McLaughlin. Hence all the care taken by pomologists and horticultural societies to import, gather up, prove, examine, and select the finest and most valuable sorts; fortunes have been invested in experiments of this kind, and the expenditure has been well repaid.

But this is not the only care and labor needed to obtain the best fruit—if it came without further attention, we should rate it too cheaply, and not sufficiently appreciate the blessing. In travelling through the country, and visiting the grounds of fruit raisers, and examining the exhibitions of pomological societies, a very marked difference is observed in the same variety as grown on different grounds. In one case it is small and poor flavored; in another it is large, beautiful, rich and excellent. The owner of the poor fruit is much disappointed in what he expected to see, and considers himself as "badly humbugged" by the nurseryman who sold him the trees. The successful cultivator takes his specimens to a fair, and sweeps off the premiums with their excellent quality and magnificent appearance. Now the question at once arises, what is the cause of this difference? And it is just such questions as we like to hear asked.

1. The first, and perhaps the most prominent cause, is *cultivation.* Place a tree in grass land—or give it no cultivation—let the surface become baked hard, like flagging, or allow weeds to cover the surface—and the tree will have a feeble growth, and the fruit, as a necessary consequence, will partake of the condition of the tree. A feeble tree will, of course, bear small fruit. Hence one reason why young trees often produce larger and finer specimens than old and stunted trees. Cultivation alone has often changed both size and quality in a surprising degree. Some years ago a few trees of the Seckel pear were observed to bear very small fruit; they were then standing in grass, when the whole surface was subjected to good cultivation. The next crop had pears at least triple in size. A St. Ghislain tree, on another place, in grass land, bore some of its first crops, and disappointment was felt at the small size and poor quality of the pears. A herd of swine afterwards accidently rooted up the grass and reduced the land to a mellow surface. The pears that year were greatly increased in size, and so much improved in flavor that they would not have been recognized as the same. The Duchess Angouleme, when large and well grown, is an excellent fruit. When small, it is perfectly worthless. T. G. Yeomans of Walworth, N. Y., who has been eminently successful in its cultivation, and obtained $35 per barrel for it, has found high culture of vital importance, and has remarked that when the specimens do not weigh over four ounces they are *no better than a raw potato;* and this, we think, has generally been found true. There is no question whatever that this fine pear, as well as many other fruits, have been placed on the rejected list by some planters for want of good management, and deficient or no cultivation.

2. There is another requisite for obtaining good fruit—almost as important as the other, and in some respects more so. This is *thinning the fruit on the tree.* And yet it is scarcely ever practiced. The farmer who takes great care not to have more than four stalks of corn in a hill, and who would consider it folly to have twenty, never thins any of the twenty peaches on a small shoot, and they are crowded, small and flavorless. The gardener who would allow twenty cucumber vines in a hill, would be called an ignoramus by his neighbor who at the same time suffers a dwarf pear to bear five times as many specimens as it could profitably mature. The herdsman who should attempt to summer ten cows on an acre of pasture, is not greatly unlike the orchardist who allows his apple trees to bear more than the trees could profitably support; and ten starved cattle would be a counterpart of the numerous stunted specimens of fruit.

E. Moody of Lockport, a very successful fruit marketer, lately stated before the Fruit Growers' Society at Rochester, that he had found great profit in thinning the fruit on his peach trees; that while he had much fewer specimens in consequence of thinning, he had about as many bushels; the larger peaches could be picked in far less time; and while his fine crop sold readily at a dollar and a half per basket, his neighbor, who did not practice thinning, found it difficult to sell his for thirty-seven to fifty cents. President Wilder said, in his recent address before the American Pomological Society, "One of the best cultivators in the vicinity of Boston has reduced this theory to practice, with the happiest effect, in the cultivation of the pear. He produces ever year superior fruit, which commands the highest price. Some have doubted whether this practice can be made remunerative, except in its application to the finer fruits. But another cultivator, who raises an annual crop of the best apples, assures us that the secret of his success is the thinning of the fruit, and he has no doubt of the economy of the practice."

These two practices—*good cultivation* and *thinning the crop*—are the foundation of the difference between such superb and magnificent specimens of the pear as graced the extended tables, and densely filled the vast hall occupied by the Massachusetts Horticultural Society, and such miserable fruit as we sometimes see borne on the grass-grown, weed-choked, mice-gnawed, sickly-leaved, forsaken trees on the slipshod farmer's grounds—planted out with hardly the expectation, but rather with a sort of dim hope that they would grow and take care wholly of themselves.

One of the best things that a horticultural or pomological society could do, would be to place conspicuously on exhibition a collection of such splendid fruit as might be raised under all the favorable influences of good culture and judicious thining; and another collection beside it with all the marks of small size and scabbiness which might be expected from utter neglect. One collection should be marked "FRUIT RAISED UNDER THE EYE OF INDUSTRY AND VIGILANCE," and the other labelled, "FRUIT ALLOWED TO RAISE ITSELF."

Pruning should not be omitted as an important requisite, but so far as its influence on the fruit is concerned, it comes under the same head as thinning, and is indeed a useful auxiliary to the latter. A peach tree may generally have its fruit readily and easily thinned by cutting back; and an apple tree that is pruned at the top by thinning in from the outside, (instead of trimming and thinning up from below, and leaving the outside as thick as ever,) may have the proper number of specimens easily controlled.

Orchardists have got to take hold of this matter. Orchards are increasing in number, competition will arise, purchasers are improving in discrimination, and will not be satisfied to pay much for poor stuff. Shrewd orchardists, who know how to secure a permanent demand for their products, as well as to obtain the highest prices, will be first to adopt these modes of manufacturing the finest article and unless others fall in they will be left in the lurch. The next twenty years, if the world moves on as it has done, will witness an astonishing education in the masses, in a knowledge of excellent fruit, and in the discrimination between a poor and a fine article. If they can be supplied with the latter, they will buy and consume; if nothing but the former can be had, they will reject it with disdain. This will become true to a great extent, sooner or later, and the raisers of fruit for market must trim their sails accordingly.

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[For the Country Gentleman and Cultivator.]

Small Pox among the Indians and Prairie Wolf in Oregon in 1853.

I find the following in Dr. J. G. Cooper's report on the mammals collected in the Explorations and Surveys for Railroad from the Mississippi to the Pacific Ocean. The survey was made under the direction of the late Gen. I. I. Stevens, who fell at Chantilly on Monday Sept. 1, while gallantly leading his brigade in a bayonet charge upon the rebels.

The Dr. says, "In 1853, during the small pox epidemic among the tribes north of the Columbia, the natives, frightened, left their dead unburied. These were devoured by the Prairie wolves, who shortly became afflicted with a terrible skin disease, in which the hair fell off, and the whole surface of the body became covered by scabs and putrid sores, which, irritated by the sun, wind and sand, were a dreadful annoyance to the miserable brutes, who undoubtedly perished in great numbers."

CATTLE DISEASE IN VERMONT—SMALL POX AMONG THE SHEEP IN GREAT BRITAIN.

By notice in the Co. Gent. of 23d October, I learn that there is a "fatal disease among cattle in Vermont," and that there is great danger in skinning the dead cattle or working the hides at the tannery. Such being the facts, the greatest caution should be used in the disposition of the animals after death. They should be deeply buried beyond the reach of dogs, swine, &c., as in all probability it would be death to all animals feeding upon the flesh of these dead creatures.

By recent accounts from English papers we also learn that there is a fatal disease prevailing among many flocks of sheep in England. The disease is termed "small pox among sheep." Probaby dogs or other carnivorous animals feeding upon the carcass of sheep dying of small pox, it might have the same effect upon them that the feeding upon dead Indians by the prairie wolves had upon them.

At any rate, the utmost care should be used in selecting sheep in England, for importation into this country. Before the year comes round we shall want all the wool that our entire flocks can furnish, and we had better never import another sheep from Europe, than to introduce this "sheep small pox" among our flocks. L. Bartlett.

October 27, 1862.

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A SWISS SOUP.

Boil three pounds of potatoes, mash them well, and add slowly some good broth, sufficient for the tureen. Let these boil together, then add some spinach, a little parsley, lemon, thyme and sage, all chopped very fine. Boil together five minutes; pepper and salt to taste. Just before taking it off the fire to serve, add two well-beaten eggs.

TREATMENT OF CREAM IN WINTER.

Deep or Shallow Pans.—In order to determine with certainty the results of setting milk for cream in deep or shallow pans, I have made several experiments, and, although on a small scale, they have been made with accuracy and care.

The milk from two cows was mixed at each milking, strained into common-size pans, and allowed to stand 48 hours. At this time the cream became hard, and was skimmed off wholly free from milk. The milk had been measured in each pan when strained, and when skimmed the cream was measured and weighed, but I do not place full reliance upon the weight, as our common steelyards were used. Believing that temperature has effect on the milk, it was kept as equal as possible each day. No fire was kept in the room during the night, and I estimate the average temperature of the room at 46°. The temperature from 9 A. M. to 9 P. M., was 65°. The position of the pans was similar, being on the same shelf. The following is the result:

In pans	containing	1	quart,	the cream	measured	1	gill.
do.	do.	2	quarts,	do.	do.	2	gills.
do.	do.	3	do.	do.	do.	2½	do.
do.	do.	4	do.	do.	do.	3	do.
do.	do.	5	do.	do.	do.	3¾	do.

The same experiments were tried twice successively with the same results. For another experiment the milk was allowed to stand 72 hours, but *without any addition* to the measure of cream. The question will readily occur, whether there would be any difference in the per centage of *butter* in either of the above experiments. This I cannot say, but I am positive in my own mind it is in favor of the milk in *shallow pans.*

I have experimented in various ways in the treatment of milk and butter-making, and have come to the following positive conclusions, viz: Milk should be strained immediately after milking, and that two quarts is sufficient for one pan. No more cream is obtained from milk which has been heated, than from that which has been kept in a room of the proper temperature. Cream should be kept at the same temperature after being skimmed, as before, during cold weather; also it should be stirred twice a day, and a little salt stirred in two or three times while being gathered for a churning; this will prevent the white particles of curd seen in butter. Forty-eight hours is sufficient for the milk to stand before being skimmed, if proper treatment is pursued. For churning the cream should be warmed gradually. This, Mr. Editor, is in my humble opinion the best method of treating cream during the winter months; for summer my method is somewhat different. A Farmer's Wife *in The Homestead.*

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TURNIPS FOR MILCH COWS.

Milo Smith of Northampton, in a communication to the Homestead, made the following statement: "We tried one of our best cows in milk recently, that was fed half a bushel of turnips a day in addition to her other feed, by weighing her milk carefully for one week. We then left off feeding the turnips, while her other feed was precisely the same. She dropped off on her milk from two to three quarts per day, and on returning the feed of turnips, she came back within three days to her full flow of milk. This difference in the quantity of milk, as we sell ours, makes the turnips worth from 15 to 18 cents per bushel, and I think they can be raised for much less than that."

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Boils.—A correspondent of the *Prairie Farmer* gives the following recipe to those suffering from one of Job's curses. It is intended for "finishing off" the bolis, after they have attained their heading: Take a glass bottle, fill with water as hot as the skin can bear to have near it, empty the same out, and apply the nose of the bottle to the wound while hot. In a second or two, such a rushing out of the causes of all this trouble will make short work of Mr. Boil. Of course, the boil should be ripe for discharge.

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Don't fret on account of your bankruptcy. Your creditors will do it for you.

[For the Country Gentleman and Cultivator.]

Wintering Cattle---Cut vs. Uncut Feed.

Messrs. Editors—I was a good deal interested during the past winter, in reading the articles in your valuable paper, on the subject of cutting feed. Upon this important point as on stabling, I am sorry to differ with such a practical and experienced agriculturist as John Johnston, Esq., and yet, as it regards the latter, if I had a small stock, and could arrange my sheds so as to shelter them perfectly, I do not think that we would differ very widely on that point. Even then, however, I should prefer the sheds enclosed, and a loose box for each animal. But with a large stock, and where you wish to keep as many as your room will accommodate, my judgment is that the most economical way, both for room and feed, is stanchions.

Since my correspondence with "Old Hurricane," I have expected to see him, as he accepted my invitation to visit this good old Dutch town. I looked for him during last summer and autumn, but "could'nt see him," and have now almost given up his coming, but have not given up cutting stalks, although J. L. R. of Jefferson county, has come to the conclusion that he would not give a man his board for performing the labor of cutting stalks and straw for a large stock. He farther states that he has been in the habit of cutting much feed, but during the last winter he cut none at all, and he does not think that either himself or his cattle have been the gainers by cutting. In describing the feeding of his stock in a general way, he says he should think they had not consumed any more fodder, and with as little waste as when it was cut for them.

Now this is simply a wholesale denunciation of a system, which, having been tested by actual experiment, has been proved to be both economical to the feeder and beneficial to the animals fed. I am fully convinced, and am fully prepared to demonstrate that the same amount of coarse fodder will feed nearly twice the number of cattle, after it is properly chaffed, that it will in its long state; and with cornstalks alone it will do fully that, if not more. I wintered the past winter sixty-five cows, one pair oxen, eight horses, two colts, and thirty-five ewes. From the time we commenced feeding, about the middle of November, to the first of March, we did not feed two tons of hay to the whole stock. They all eat cornstalks, cut and crushed by one of Hickok's large machines, and our cows continued to eat them up to the 9th day of May.

A good farmer told me the other day, that "stalks would do pretty well to winter cows on, but they wouldn't do to spring them with." Now if J. L. R. is of that opinion, I should be glad to show him the animals. I did not feed them on stalks only,—nor have I mixed meal with what he chooses to style this nearly worthless article of fodder,—but I have given each cow that was being milked, a good mess of brewer's grains and four quarts of buckwheat bran and canail ground together, and four quarts wheat bran (which was light,) per day. The wheat bran and grains I consider nearly worthless except for milk. As soon as a cow was dried off, we took away her grains and wheat bran, giving her cut stalks and four quarts buckwheat feed, and then she would improve in condition.

During the winter while we were feeding nearly a hundred baskets full of cut stalks per day, there was not an average of five baskets full wasted. These stalks were not grown for fodder—they were nearly all cut up by the ground, and large stalks from which some good corn had been taken.

Our method of feeding cornstalks is to have the mangers so divided that each animal has a separate box for its head. After they are in the stanchions and begin to eat, they can neither see nor be interfered with by their neighbors. The stalks are thrown in dry, and the bran for the milch cows being wet, they receive their portion on the stalks. Of course they eat the bran first, but while eating it they contrive to get those "tasteless dry corn-butts" so coated that they eat them nearly all. From one stable of 30 cows I am confident we did not waste thirty baskets full per month. Now if J. L. R.'s cattle will eat stalks as clean as that without cutting, they will do more than ours; and although he is so weak in the "spinal column and weaker in the faith," I would like him to show me the animals that will eat cornstalks six feet long as clean without cutting as they will when cut and crushed for them. I do not call the above *high feeding*, but our cows have been fed regularly—have had pure water twice a day—they have had no bedding, and the only mistake I have made is in not selling some of them for beef before they approached so near the time of calving. Many of them were good beef in May—at all events I am willing to compare stock with my friend J. L. R., and compute the cost per day of keeping them, or I will next winter start 10, 20, 30, 40, or 50 head of cows. I will feed cut feed by weight, and he shall feed long feed by weight—fix the price of hay, stalks, and straw—also of ground feed, and then carry them through to May 1st, and see who can do it the cheapest and have the best looking animals.

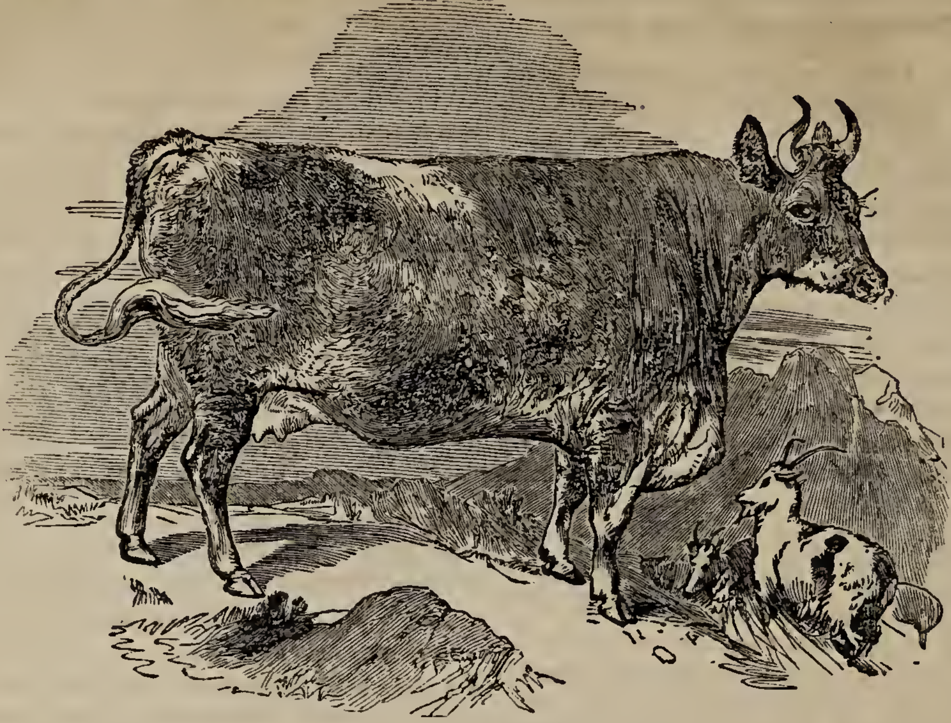
KALABARAGH.

Farm Improvement—"L. W.," in the *Boston Cultivator*, mentions the case of a farm that, when bought by its present owner, "would not subsist summer and winter, more than six head of cattle, which will now keep thirty head and leave hay to sell besides." It has been made productive by using manure and peat compost, (so at least we understand his statement) and the draining and cultivation of swamps and waste land. If every farmer in like situation would invest in these improvements, their farms would soon double in productiveness and value. B.

Digging Potatoes Late.—*Editors Country Gent.*—The practice of your Morristown, N. J., correspondent of digging potatoes late, is also the practice here. It is known that potatoes left in the hill till late, will lose all their rotten ones. These will decay, and that rapidly, and leave only sound ones,—though it must be confessed that sound ones are few and far between some seasons. This year the crop is a good one, with few rotten ones: and the rot is late. The peach-blows have just commenced to rot. F. G. *Starkville, N. Y.*

Care of Horses.—Believing that prevention is in all cases better than cure, one of the most eminent Veterinary Surgeons in Scotland has been pointing out to farmers some of the causes of disease and death among their horses. One of these might be taken into consideration by some in this country, and if due warning is taken, a change of management would result. The cause of disease referred to, is turning out horses to pasture after working all day, even when warm, and also whether the nights be wet or dry, cold or warm. Horses must thus be often chilled, and are thus exposed to diseases of the lungs, and to rheumatic ailment. A.

Foreign Grapes in the Open Air.—I have been trying for 15 years to raise foreign grapes in the open ground, and have failed in pruning and protection all the time. This year I have succeeded. I have had 46 fine large bunches on one vine, the growth of last year. I have employed French, German and English gardeners to graft the foreign on the wild and common grapevine. They have all failed in my grounds. This spring I have succeeded as easily as on the apple. The only science is *to know when to do it.* Some time I may write these things out for you. J. C. J. *Louisville, Ky.* [We should be very glad to receive full details of the experience of our correspondent. Eds.]



Kerry Cow.

THE KERRY CATTLE.

Considerable attention has been attracted to this Irish breed, especially to the cows, as good milkers, hardy, light feeders, and well adapted to rough and scanty pastures. They are usually jet black in color, but not always; about the size of the Jerseys, of compact and symmetrical form, "combining the fore quarters of the Devon, with the hind quarters of the Durham." Of those imported a few years since, and shown with their descendants, at the recent Norfolk Show, the *Boston Cultivator* remarks as follows:

"Of distinct breeds, there were on the ground seven of the Kerry herd of Arthur W. Austin of West Roxbury. The lot consisted of two imported cows, three yearlings and two calves. From a statement furnished by Mr. Austin, it appears that one of the cows has given sixteen quarts of milk a day, by actual measurement, the present season. Others in the herd have given nearly as much. The young stock have thriven well, and the whole herd show that they appreciate the advantages which this country affords them over the rough, bleak mountains of their native land."

Hon. John Wentworth, writing to the *Prairie Farmer* of the same herd, says:

"They are remarkably gentle, and their hair is uniformly very thick, showing their ability to withstand the severest winters without shelter. Mr. Austin has experimented with them upon different kinds of pastures and expresses the belief that they are emphatically the "poor man's cattle," yet it is likely that they will be monopolized by the rich for some time to come. Whilst I will say that they are exactly the breed of cattle for the mountainous pastures of New England, I will also say that if I lived out in the open prairie, had no barn, could keep but one cow, I would prefer a little black Kerry cow to all others."

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Notice to Devon Breeders.—The Committee on Devon Pedigrees, appointed by the Association of Breeders of thorough-bred neat stock, will receive pedigrees for publication in the American Devon Herd-Book up to Dec. 3d, at which time the committee meet at South Wilbraham, Mass., to examine pedigrees and prepare them for the press. Other agricultural papers will confer a favor by noticing this fact. H. M. Sessions.

South Wilbraham, Oct. 29.

OSAGE ORANGE HEDGES.

In the report of the Committee on Farms, of the Illinois State Ag. Society, published in the last No. of the Journal of that Society, we find the following description of the Osage Hedges on the Farm of Mr. S. B. Turner of Warsaw:

The great feature of the place is its Osage hedges, which, with the exception of some twenty rods of post and board, to cross a piece of low ground, is the fencing. They are well made, and proof against any and all descriptions of farm animals. It is handsomely trimmed in the obtuse conical form, which gives it an ample base, and at the same time exposes the leaves to the sun. The most of the fence is made with a single row of plants, but Mr. T. prefers two rows set alternately thus: ***** This gives at once a better base, but for farm purposes we doubt if it is better than a single line set four inches instead of two lines at eight inches; the same number of plants are used, and the cost of the setting about the same. Mr. Turner's hedges are all perfect, that is, there are no breaks in them, and but one place where a small dog could get through, and that was for the purpose of letting the ratters through into the next field. The fences are a perfect mass of verdure, armed with its bristling thorns concealed beneath the leaves, but ready, on the approach of an enemy, to dispute his passage. The hedge should be trimmed twice a year, the first in June and again in September or first of October, but never during a drouth—this has reference to the full grown hedge. Mr. T. uses a short scythe; one man can trim a hundred rods a day on both sides, and do his work first rate. Trees should not stand in the fence line, especially when young, as the shade retards their growth. Along side of a timber belt it would be different, for there the hedge would have the sun during part of the day.

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Premiums on Fleeces of Fine Wool at State Fair.—The report of the committee on 20 fleeces of fine wool, awarding the first and second premiums to George Brown of Phelps, Ontario county, was not received until after the list of premiums was published. The committee report that the fleeces, (40 in number) were very superior in quality and condition, and were accompanied by the statements as to feeding and weighing the sheep, &c., as required by the Society, and Mr. Brown is justly entitled to the first and second premiums.

B. P. JOHNSON, Sec'y.

Agricultural Rooms, Albany, Nov. 6, 1862.

THE CULTIVATOR.

ALBANY, N. Y., DECEMBER, 1862.

TO THE FRIENDS OF THE CULTIVATOR.

Upon the Last Page of this Number will be found our terms for 1863. Those who have already received by mail a prospectus for the new volume, are earnestly invited to circulate it among their friends; and, if they cannot themselves attend to the formation of a Club, will they not see that some one else undertakes it *at once?* The month of December is the all-important season for such an undertaking, and those who are *first in the field*, are generally the most successful.

Copies of the Annual Register have been already sent, for use in canvassing, to many of our Agents, of the longest standing. If there are *any who have been accidentally omitted*, will they please inform us, in order that the omission may be promptly rectified?

The War Map referred to in our terms, is one of great beauty and perfection, Engraved on steel and colored by hand, and is *just twice the size of one entire number* of the Country Gentleman. As we cannot give up our space, wholly occupied as it is with Practical Agriculture and Horticulture, to the subject of the War, this Map, fully explaining itself without trespassing upon other space, and affording exactly the information now most desired in every household, will be found the most welcome and appropriate present which could possibly accompany a subscription for our Journals.

A Copy of this Map, we think, need only be shown, to secure the subscription of nearly every farmer to whom application is made. We will send a sample, strictly for use in procuring subscribers, on receipt of *Fifteen Cents.* It covers a space of nearly fifteen square feet, is colored by hand, each State separately—shows all county boundaries with entire distinctness, and gives the name of every town, village, and stream of any importance—having been revised and completed to the latest dates received up to the present month, and is one of the handsomest and best specimens of Map engraving we have ever seen.

About Remittances.—Remittances should be made in United States or New-York currency, where practicable, but the bills of any Bank in good standing, wherever situated, are received at par. *All Registered Letters, containing money, are at our risk.* Large sums should be sent by draft on New-York, Albany, or any other Eastern city. Our friends are particularly requested *not* to send us fractional notes or "shinplasters" issued either by corporations or private parties. Change can be remitted either in the Government postal currency, or in ordinary Post-office stamps—we prefer the currency where it can be obtained. But "shinplasters" issued out of Albany, are of no use whatever to us.

To Canada Subscribers, so long as the present rates of exchange continue, there will be no extra charge for American postage, if their subscriptions are remitted in bills of their own specie paying banks. But if remittances are in American currency, they will add as heretofore, *six cents per copy* for The Cultivator, to the published terms, and twenty-six cents per copy per year for the Country Gentleman, as that is the amount of the postage we are obliged to pay on the two papers respectively to the Canada lines.

Club Subscribers need not all be located at the same Post-office.

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TERMS OF THE COUNTRY GENTLEMAN.

The Country Gentleman contains sixteen large pages every week, and forms two volumes per year of 416 pages each—subscription $2 per year, or $2.50 if not paid strictly in advance. The volumes begin with January and July.

The Country Gentleman for 1863.

One Copy,	$2.00
Three Copies,	5.00
Five Copies, (with one Map as Premium to Agent,)	8.00
Ten Copies, do. do. do.	15.00

The Country Gentleman and Annual Register for 1863.

One Copy,	$2.25
Two Copies,	4.00
Four Copies, (with one Map as Premium to Agent,)	7.00
Ten Copies, do. do. do.	16.50

For Ten Dollars we will send Five Copies of the Country Gentleman for 1863, with Five Maps, and an extra copy of both the Paper and the Map to the sender of the Club.

Club Subscribers who pay $1.50 by the terms given above, may also receive the War Map by adding fifteen cents each. Thus a Club of Ten, all of whom wish it, may remit $16.50 for ten copies of the Country Gentleman and Ten Maps, or $18 if ten copies of the Annual Register are also desired.

The Country Gentleman in a Cultivator Club.—In making up Clubs, a subscription to the Country Gentleman at $2 a year, will count the same as Four Subscribers to The Cultivator, and the subscriber to the Country Gentleman will receive one copy of the Register. That is, Five Dollars will pay for one copy of the Country Gentleman and six copies of The Cultivator, each subscriber receiving a copy of the Register. And Ten Dollars will pay for six copies of The Cultivator and four copies of the Country Gentleman, each subscriber receiving a copy of the Register.

☞ Agents who wish the Register to supply to every subscriber as fast as they take his name, can remit for them at the rate of Fifteen Dollars a hundred, (15 cents apiece,) and on completion of their lists, send the remaining 35 cents for each subscriber. This has proved an excellent plan; each subscriber, as soon as he pays his Fifty Cents, receives one-half the money back in a Twenty-five cent book, and the Agent has no farther trouble in the collection of the money.

The Register Postage Free.—We shall prepay the postage on all copies of the Annual Register without charge to the subscriber.

Address, LUTHER TUCKER & SON,
Albany, N. Y.

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High Farming.—"We positively believe," remarks the Agricultural Editor of the *N. Y. Evangelist*, "that the majority of farmers would be better satisfied and more richly rewarded, if they would feel their way cautiously, but not very slowly, to a higher style of farming—one which undoubtedly they would find more expensive when they reckoned by the acre, but which we verily believe would prove less costly when reckoned by the qualities produced; less profitable perhaps the first year of trying it, but pretty sure to be more remunerative the second year, and still more the third, and onward."

It is a fact proved in hundreds of instances, but as yet but half believed by the majority of farmers, that "high farming, with large crops, is more lucrative than low farming with consequently small crops."

A GOOD APPOINTMENT.—We notice with great pleasure that JAMES S. GRENNELL, Esq., of Greenfield, has been appointed Chief Clerk in the Agricultural Department at Washington. We have been in the habit, for several years, of meeting with Mr. Grennell at the Farmers' Clubs in western Massachusetts; and, but a few weeks since, had an opportunity of making a thorough examination of the farm conducted by him. We feel warranted in saying that in point of intelligence, and untiring industry in its application, as well as in a real interest in the advancement of practical agriculture, Mr. Grennell is a fair representative of the front rank of New-England farmers; and that it is fortunate for all concerned that the sphere of his influence and usefulness has been so much enlarged.

We cut the above from the *Massachusetts Ploughman.* Mr. GRENNELL has for a number of years conducted the affairs of the Franklin County (Mass.) Agricultural Society, as Secretary and Treasurer, with great credit both to himself and to the farmers of that county; he is one of the members of the Massachusetts State Board of Agriculture of longest standing, and has contributed a number of valuable articles, not only for its annual reports, but also for those of the Agricultural Department of the Patent Office. With a considerable knowledge of the agriculture of the Eastern States, derived both from experience and observation, he unites the advantage of some years' residence at the West, where he had also an opportunity of studying the systems of farming practiced. His name was suggested for his present position, on the part of Massachusetts, at an early period after the establishment of the Department, and we are heartily glad to see that the appointment has been at length offered and accepted where we are confident of its being so well and usefully filled.

The Department of Agriculture, if rightly directed, may be made of great service to the Farmers of the country. We hope to see its officers, by degrees, evolve from the errors and confusion of the past, a bureau which shall prove an efficient means of advancing our Agricultural interests, of collecting and disseminating information heretofore unsought or inaccessible, and of representing in the councils and policy of the nation, that great class upon whom its prosperity so largely depends, but who have hitherto been so rarely consulted, even in matters in which they are most immediate concerned. But while the true position and influence of this Department cannot be at once attained, we shall watch its initial operations with great interest, since so much depends upon a good beginning, as regards the credit and standing to be acquired for it, both with the other branches of the government and among the people at large. Mr. GRENNELL has brought to the arduous duties of his post, an intelligent and persevering determination to perform them well; and, with due co-operation and support, the prospects of the Department must be the brighter for his having been appointed.

IMPORTS OF BREADSTUFFS INTO GREAT BRITAIN.—Our latest foreign exchanges give the Trade and Navigation Accounts, showing the English Exports and Imports officially for the first eight months of the present year, ending with Sept. 1. These returns manifest, as we already know from our own heavy exports, a vast increase in English imports of wheat and flour during the month of August. Up to June the general deficiency of the wheat crop was only half believed in, in Great Britain, and the imports for the six months were nearly 2,000,000 bushels less than they had been in the previous year. Early in July the fact of the smallness of the crop had become too patent to be doubted, and when the month closed the imports had reached a point higher than in 1861. Throughout August, wheat was brought in increasing quantities, and showed at the close an increase of 4,800,000 bushels as compared with the corresponding period of 1861, while in the month alone the quantity was nearly doubled. The total quantity imported in the eight months into Great Britain was 44,111,208 bushels, to which is to be added the equivalent in bushels for the flour imports, making a total equal to 48,357,944 bushels. The computation of the value of these imports is always a month behind the statement of their amount; and the authenticated cost of the seven months' imports only, for wheat and wheat flour was £14,578,826, and for the other cereals and legumes £4,689,467, being in the aggregate £19,267,293, or very nearly *a hundred millions of dollars* for the cereal food of the English nation purchased in other countries from the 1st day of January to the last day of July.

☞ We have already had several notices with reference to the appearance of Small Pox in Sheep, in England, during the past summer. The alarm arising from this cause is now constantly spreading. The breaking out of the disease in Wiltshire, where it was at first hoped that its progress might be stayed, has been followed by its more recent ravages among the flocks not only of the neighboring counties of Dorsetshire, Hampshire, and Berkshire, but also in the more distant and highly improved agricultural county of Lincolnshire. English farmers are now combining in various parts of the country to establish measures for self-protection if possible, and to form societies of mutual compensation for losses that may occur. Prof. Symonds, who has lately been appointed by the Government as a Special Commissioner to deal with the disease, strongly recommends inoculation as a preventive of its continued spreading, but Prof. Gamgee of Edinburgh is quite opposed to this method. There are two others under discussion—the attempt to prevent contagion by the complete isolation of diseased flocks, the thorough destruction by fire or otherwise of the carcases of those that die from this cause, or of anything else that can possibly convey the seeds of the disease,—and, lastly, the method of vaccination, as employed to prevent small pox among the human family. Jonas Webb and Henry Overman have just published letters strongly in favor of vaccination. Mr. Overman says:

> "It was in the year 1848 that we suffered in our county from small-pox in sheep, when my late father vaccinated all his sheep, and with very great success. My father wrote in the papers upon the subject, and was at first laughed at; but many soon wished they had followed his example. He was the only man in the neighborhood that did vaccinate, and he had but one case, and that so mild the animal soon recovered. Our neighbors lost hundreds; some had it naturally, and others by the foolish and ignorant practice of inoculation. From what I saw then, I think a man is made to be gulled into inoculation. My father sent vaccinated sheep to his neighbors, for the purpose of testing the safety of their being with diseased animals: not one died; some took it, but had it in a very mild form, others were never attacked. Mr. Allan Ramsey heard of my father vaccinating through Mr. Jonas Webb, my father having advised Mr. Webb to do the same, as he was sending rams to all parts of the kingdom. My father went over to Mr. Webb's to meet Mr. Ramsey, and the result was that Mr. Webb had his sheep vaccinated."

The recollection of the vast destruction of sheep by small-pox in 1847–48, as much as any particular losses that have yet occurred the present season, is what has excited so great alarm thus far; but there is nothing to lessen the feeling of insecurity so long as the scourge appears to be constantly making a progress sure although slow.

A Vermont Dairy.—A correspondent says: "I obtained the statement of one of our small farmers last March, in regard to his dairy, consisting of 15 cows, which he takes care of himself, intending to send it to the Country Gentleman, but it got mislaid, and I can only give you some of the items from recollection. The *average* yield of butter per cow for the year was 230 to 235 pounds, which he sold at the highest market price—having sold his butter to the same produce dealer in Massachusetts for some 10 or 15 years. I think he said four of the fifteen cows were farrow. The regular feed for them is hay or hay and straw, and two quarts of unground oats per day in the winter season, the oats being given at 9 o'clock P. M., the last feed before sleep. When I saw them in March, they all looked as slick and thrifty as a bullock for the shambles."

☞ Wm. Buckminster, who, we believe, established the *Massachusetts Ploughman*, and who has edited it for twenty-one years, announces in the last number of that paper, his retirement from his editorial duties, and that he and his son, who has been associated with him for some years, have disposed of the paper to Hon. Hugh W. Greene, by whom it will hereafter be published. Mr. B. retires, in the 79th year of his age, with the best wishes of his contemporaries, all of whom, we are confident, will unite in the desire that the days which remain to him here, may be as full of peace and happiness, as the past score of years have been industriously devoted to the good of his brother farmers in "the old Bay State."

A Convenient Ash-Sifter.—We always feel an interest in all contrivances for lessening domestic or household labor, and every good machine for this purpose is worthy of special notice. One of the best things under this head, which we have lately met with, is the Ash and Coal Separator made by Wm. Lines of Rochester. It appears externally something like a small neat case of drawers, about one-third the size of a common bureau. A peck of unsifted ashes is thrown in at the top, and the dust kept from rising by shutting down a lid. A slight vibratory motion of a lever for ten seconds does the work. The ashes is found in one drawer and the coal in the other. We have had it in use for some time, and find it the "handiest" thing of the kind we have seen; no dust can escape from it to the room; and the cost is only about three or four dollars.

Illinois Cotton.—The Prairie Farmer states that Messrs. Sprague and Reynolds, extensive manufacturers of cotton at Providence, R. I., and who are intimately acquainted by personal inspection, with the cotton crops of the South, have recently visited Southern Illinois, and make a very favorable report. "In their opinion," says the Prairie Farmer, "the samples gathered in 'Egypt' are equal to any upland cotton grown in Carolina, Alabama or Tennessee. Yet these samples, of which we have some in our office, were not taken from thoroughly cultivated fields. It is thought by them, that with good culture, such as the crop usually receives in the Southern States, a *superior* staple can be produced, and in sufficient quantity per acre to make it remunerative to the producer, much more so, even at ordinary rates, than wheat or corn, and at present and prospective prices for quite a number of succeeding years, by far the best paying crop that can be produced in that part of our State."

☞ The Deseret News of October 8th, contains a full account of the "Utah State Fair," which took place at Great Salt Lake City, Oct. 2, 3, 4. From the Directors' report we gather that the display of field crops was limited; that of vegetables better than heretofore; fruits and flowers "handsome and abundant;" the show of cattle very limited; horses and sheep apparently very few in number; and the classes of domestic and other manufactures such as to manifest gratifying evidence of improvement. As to cotton culture, this report says, "that in Washington Co., (Utah,) cotton culture is considered a decided success, not only in quality, but also in the quantity produced per acre. Mr. Graves exhibited a specimen of the Peruvian cotton tree, in pot, nearly a foot high, the seed of which was planted in the middle of July last, which he obtained from Peru, through a friend in Iowa." The remarks upon the display of fruits prove that more attention has been paid to the introduction of improved varieties in Utah than some of our readers will be prepared to expect. Thus "Mr. Ellerbeek's collection of grapes, which took the first prize, including the Chasselas, Musque, Rose Chasselas, Chasselas de Fontainebleau, early White Sweetwater, Child's Superb, Buckland's Sweetwater and White Frontignac were a good collection, though from young vines. The magnificent collection of California grapes from President B. Young's vineyard, elicited universal admiration. * * * The awarding committee have given to Mr. Ellerbeek's collection of strawberries the first prize. The Wilson's Albany, Vicomtess and Victoria are considered the best varieties for cultivation in hills, and the Scarlet Magnate for cultivation in beds.

Personalities.—A venerable correspondent writes us, protesting against the "personalities" which occasionally occur in the discussions carried on in this paper. We agree with him in his view of the matter, and endeavor to avoid, so far as we can, all allusions which seem to be intended as personally offensive; but many writers have a jocular way of alluding to their opponents with which we do not deem it our province to interfere, as they cannot always be expurgated without injury to the purpose of the writer, and because the allusions are so evidently good-natured, though sometimes somewhat sarcastic. If contributors would observe the same courtesy in their writings which they do in personal intercourse, there would be little danger of unkind feeling being provoked.

Keeping Corn Fodder.—"J. L. R." says the best way to keep corn fodder is "in the stook." We have found it so by several years experiments. Sometimes when husking late in the season, corn drawn to the barn, we stook it around the barn-yard, setting first a large sized stook in the ground, and binding it, and then putting another row of bundles around it at the height of twelve to fifteen inches from the ground, and binding again. Such stooks invariably cure and keep well. Cornstalks stooked as husked in the field in large bunches, may be drawn into the barn and mowed away safely, after one of the dry freezing winds of winter, when there is no snow on the ground. J. H. B.

☞ New-York—the first State in the Union in point of Population, is the 17th in geographical area. It is the 4th in density of population, having 84 inhabitants to the square mile, while there are 158 in Massachusetts, 134 in Rhode Island, and 98 in Connecticut. These facts are derived from the Preliminary Report of the Census of 1860, for a copy of which we are indebted to Mr. Supt. Kennedy, through J. S. Grinnell, Esq., of the Bureau of Agriculture.

The Agricultural tables in this Report, show that although New-York is only the 17th State in Area, she stands 1st in the extent of Improved Land, Illinois being 2d, Ohio 3d, Virginia 4th, and Pennsylvania the 5th on this list. New-York also "stands at the head" in the cash value of her Farms, Ohio being here the 2d, Pennsylvania 3d, Illinois 4th, and Virginia 5th. In value of Farm Implements and Machinery, New-York again is 1st, Pennsylvania 2d, Louisiana 3d, Illinois 4th, and Ohio 5th.

In Live Stock, New-York stands 3d to Ohio and Illinois in the number of Horses; but in Asses and Mules she is the 23d on the list of States. New-York is first by very long odds, in Milch Cows, Ohio standing 2d with less than two-thirds as many; is third in Working Oxen to Texas and Missouri; and 5th in "Other Cattle," to Texas, California, Ohio and Illinois. New-York has the 2d largest number of Sheep, Ohio being 1st, Indiana 3d, and Pennsylvania 4th. In Swine we make no show at all, being 17th from the top, with Indiana 1st, and Missouri, Tennessee, Ohio, Kentucky, and several other States following close after her. But in the total value of Live Stock, New-York again heads the list, Ohio following next, with not quite eight-tenths our pecuniary amount.

As to Crops, New-York is the 6th State in the production of Wheat, the 2d in that of Rye, the 14th in Indian Corn, the 1st in Oats, the 8th in Tobacco, the 5th in Peas and Beans, the 2d in Barley (California being the 1st); the 2d in Buckwheat; the 1st in Orchard Products, in those of Market Gardens, and in Hay; the 3d in Clover seed and in Grass seed; the 1st in Hops, (producing nearly ten-elevenths of all grown in the Union,) the 1st in Flax, and the 1st in Maple Sugar, (producing more than one-fourth the total crop.) In amount of Wool, she stands second only to Ohio, and the difference in favor of the latter State is not so large as in the number of Sheep, showing either that our fleeces average heavier, or that more sheep leave the State of Ohio when young (which may be the case) to be fed or shorn at the East. Our product of Butter in New-York is set down at more than double that of Ohio,—not quite double that of Pennsylvania—the two States ranking next. Our product of Cheese is also more than double that of Ohio, and lacks comparatively little of being *one-half* the total product of the Union. The "value of animals slaughtered" is greater in New-York than in any other State. Our product of Honey is also at the top of the list.

These odd facts and comparisons do not amount to anything, except to gratify one's curiosity by showing to what objects our Agriculture is mainly devoted in this State as placed side by side with others.

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Temperature—Sod vs. Soil.—Two experiments made last August, by a writer in the *Gardener's Monthly*, to test the comparative temperature of the earth six inches under the sod, and the same depth under a bare cultivated surface, resulted in a difference of eight degrees warmth in favor of the latter.

☞ There is one item in the American successes obtained at the late International Exhibition in London, which although not of an Agricultural character, we desire to notice with especial prominence. The London "Practical Mechanic's Journal," which is high authority, remarks:—"*By far the most interesting and important Engine* to the really instructed mechanical engineer *in the whole exhibition*, is, we hesitate not to affirm, that exhibited by Charles T. Porter of New-York, and named by him after the inventor, who is said to be a working man in New-York—the Allen engine." This steam engine, as we are informed by Col. Johnson, was substituted in driving much of the machinery exhibited, *on the failure of an English engine to perform the work.* In doing this, as well as from the new principles involved in its construction, it won from all who saw it the highest commendation, of which the above extract is but a single example. The Journal, from which this extract is taken, and a copy of which is now before us, gives a Plate of this engine, accompanied by wood engravings to show its manner of action, and a full letter-press description. It is matter of some congratulation that we are thus shown to excel the English mechanics, in a point upon which, of all others, their national pride is directly concerned—the employment of steam machinery; and it is peculiarly creditable to the maker of this Engine that he should have been able, after making it in this country (as stated in the Journal we copy from,) "in such haste to be in time for exhibition, that its parts were never even offered together until the engine was being erected where it now stands in the West Annexé,"—to put it up there in perfect working order, so that "it runs at the rapid speed of 150 revolutions per minute, and gives motion to a large proportion of the weaving machinery there exhibited."

One point connected with this Engine, and attracting as much attention perhaps as the construction of the Engine itself, was the *governor* invented by Mr. Porter, and capable of regulating the speed and action of the engine with wonderful certainty and promptness. For example, according to the Journal before us, "throwing off the belt from the drum, or in other words, *suddenly releasing the engine at its great speed from all load*, was instantly responded to by the governor, and *scarcely a visible difference* in the engine's speed permitted." The governor was tested in this and other ways, and found to succeed with "great accuracy," says this account, "maintaining a uniformity of motion which it is *scarcely possible* to disturb perceptibly, even by the most extreme and sudden changes in the resistance."

Mr. Porter also exhibited a steam indicator invented by C. B. Richards, Hartford, Conn., which is characterized not only as "an extremely beautiful" affair, but also as performing work worthy of the highest praise.

We make this notice, not from the slightest acquaintance with or interest in this Mr. Porter, whom we never happen to have heard of before, but simply to show, in addition to the evidence heretofore published, that American inventors and machinists, with the slight encouragement asked from our Government at Washington, *might* not only have given to the United States the *first position* among all the nations represented at the Great Exhibition, in works of real utility, but also that the sales of their inventions, to the representatives of other countries as well as in England herself, would have done more—far more, to extend the foreign trade of the country and add to the exports of our machinery, than could have been accomplished, in any other way, by a national appropriation of similar amount. We have thus, through the short-sighted views of our national legislators, lost an opportunity which may never be repeated,—or at least not for many years to come.

☞ Vol. Third of Rural Affairs, comprising the *Annual Register* for the years 1861–62–63 will not be out until about the 10th December. Those who have already ordered it will be promptly supplied with early copies, and other orders will be placed on file as they are received.

☞ Our friends are particularly requested *not* to send us fractional notes or "shinplasters" issued either by corporations or private parties. Change can be remitted either in the Government postal currency, or in ordinary Post Office stamps—we prefer the currency where it can be obtained. But "shinplasters" issued out of Albany, are of no use whatever to us.

☞ The following awards of premiums on Reapers, Mowers and Headers were made by the Executive Committee of the Illinois State Agricultural Society, after trial of the same in the field near Dixon, Illinois, during the harvest of 1862, to wit:

For the best Combined Reaper and Mower, to John P. Manny, of Rockford, Winnebago Co., Illinois,	Diploma and	$75
For the best Independent Reaper, to Walter A. Wood of Hoosick Falls, New York, on his self-raker,	do.	50
For the best Independent Mower, to E. Ball of Canton, Ohio, on his two-horse Mower,	do.	50
For the best Heading Machine, Barber, Hawley & Co., of Pekin, Illinois, on Haines' Harvester,	do.	50

As there was but one entry of one-horse mowers no premium was awarded, but the implement exhibited by Walter A. Wood of Hoosick Falls, New York, was regarded with much interest, was carefully tested and highly commended to those desiring a one-horse machine.

So also with grain binders; but one was exhibited, that by H. M. Burson, which was operated in presence of the committee, and, together with every other implement exhibited at the trial, will receive its proper notice in the committee's report. The regular report may not be ready for publication until after the annual meeting of the Board in January, 1863. The data from which it must be made up are not yet in possession of the Secretary.

Fall-Sown Grain Injured by Insects.—The winter grain, sown this fall, looks well, where not destroyed by something like the lice that were so thick on the oats and wheat last and the present harvest. I have ten acres of wheat sown on oat-stubble, and if every stalk now living stood on three acres it would not be too thick, and it was getting thinner every day before the snow came. I pulled up a number of the stalks the other day and found from half a dozen to twenty green lice on the root or the stem under ground, there being no roots to be seen. The ground was in fine mellow condition, and the wheat drilled in and pretty deep. There are several other fields in the neighborhood affected in the same way, but all sowed and harrowed in. I heard of one spot in a field affected in the same way last season, but it was then thought to be the wire-worm. I was told this season it was a worm, and found a few small red worms in the drills, about an inch long and about as thick as an ordinary timothy stalk. It was only last week that I discovered the lice. I had intended sending you some for examination, but we have had such a fall of snow that I doubt if there are any left to be found. I would like to hear if the winter grain is affected in the same way in any other places where the grain louse or aphis was on the wheat and oats at harvest. The fields most destroyed here, as far as I have seen, are stubble, either oats or wheat. If so, what is the remedy, if any? E. T. C. *Delaware Water Gap, Pa.*

Northern Vermont.—Joseph C. Parmenter of Lowell, Orleans county, writes us that good unimproved land in that county, well located as regards railroads and water privileges, and in healthy situations, can be purchased at $2 to $3 per acre, and improved farms at from $10 to $15 per acre. The writer says—"The fact is, we have got too much land, and the war is thinning our ranks. Men with two or three farms, and fifty cows, have been left alone."

☞ In an article on the present value of land in England, the Mark Lane Express mentions that "in 1820 good land might be purchased at from £30 to £35 per acre. At present, £50 and £60 per acre are not uncommon prices; and an estate was recently sold in Suffolk at £77 per acre." No wonder the farmer must pay a high rent, when the landlord must invest $300 to $350 per acre in the purchase of the land.

Big Yield.—The California Farmer states that the farmers of Amador Valley have made splendid crops this year; and as instances says that on Martin's ranch the yield of wheat has been sixty-two bushels to the acre. A few acres yielded seventy bushels. The berry is very large and full. On a number of farms adjoining, the yield was about the same.

California Wine.—The California Farmer says that strangers can have "no possible conception of the vintage of that State, unless they take the trouble to visit the vineyards or the wine cellars, where are found the products of the grape culture. M. Keller, Esq., of Los Angeles, has 100 acres in vines, and computes their number at 100,000. He has vines fifty-eight years old in his grounds; they yield fifty, sixty, and seventy pounds each. His crop of wine this year will be 100,000 gallons. His estimate is that a vine at six or eight years will yield one gallon of wine. He has now in store at his place in the cellar under the Russ House, 16,000 gallons of wine—red, white, port and angelica—with his brandy and wine bitters. His wines are among the best of those of California.'

Clover as a Fertilizer.—John Mears says in the *Boston Cultivator*, that a gentleman of Livingston Co., N. Y., in 1839, in conversation with him, "stated that a lot of land came into his possession, which by bad management had produced only six to eight bushels of wheat to the acre. He put it to clover, sowing two bushels of plaster per acre. This crop when brown from ripeness, was turned under. The process was repeated, and the lot was put to wheat, which yielded 40 bushels per acre for four acres together. While one of the crops of clover was on the ground, he measured off two feet square or four superficial feet, digging to the depth of one foot, and removing all earthy matter. It gave over one pound per foot, or more than 22 tons of vegetable matter to the acre.

☞ The California State Fair appears to have been quite successful, notwithstanding a driving rain which occurred the last day. The California Farmer reports the receipts at $11,383.25.

Inquiries and Answers.

Apple Pomace.—Will you or some of your correspondents, please inform me what use, if any, can be made of the pomace which accumulates at the cider mill? As I have a mill, my neighbor's, with my own pomace, has accumulated to a great extent. Whether it will do for manuring purposes, or for any kind of stock to have access to it? A Subscriber. [It is of little or no value for manure. If fed fresh or before fermenting, it makes a good food for pigs, and in moderate quantities at a time, would be good for cattle.]

Flemish Beauty Pear—hardy sorts.—How long does the Flemish Beauty pear usually take to fruit on its own stock? Will it do on quince? Where can I get that pear double worked? What variety do you consider the hardiest for summer, autumn and winter, having some regard to quality—one for each season? r. w. s. *Ottawa, C. W.* [The Flemish Beauty is an early bearer, often producing fruit in three or four years from setting out, and sometimes sooner. Early productiveness is so much influenced by soil, culture, and other causes, that no certain rule can be given, except that badly cultivated or neglected trees usually bear soonest. The Flemish Beauty usually succeeds if double worked, and frequently without double working. It may be obtained as a dwarf of most of the larger nurserymen of Rochester, and T. C. Maxwell & Co., of Geneva, N. Y. Among the good hardy pears are Buffum, Sheldon, Urbaniste, Lawrence, Fulton, Tyson, and Osband's Summer.]

Sorghum for Cattle.—Can you inform me if "Sorghum," or "Chinese Sugar Cane," is a safe and nutritious food for cattle? If it is, I propose to cultivate some next season for that purpose, on account of its prolificacy of yield. If you can, please say whether it would answer best for *milking* cows or *fattening cattle.* c. r. a. [We believe it is a good food for cattle, but hope some of our readers who have cultivated it for this purpose, will give us the result of their experience.]

Plowing Apple Orchards.—I have an apple orchard, some fifteen years old. Will it injure it to plow and sow timothy? It was set with timothy some five years ago, but has now turned to blue grass. Please give me some information what is best to do with it, and oblige not only a new subscriber but a new Farmer. *Ripley, Ohio.* [It never injures young orchards to plow and cultivate them, but if the ground is kept clean and mellow it is a great benefit to them. As the orchard becomes older, plowing or cultivation is not so vitally important but very useful. Unless the soil is very fertile, all orchards should be kept cultivated. Plowing once and seeding immediately to timothy would probably neither benefit nor injure the trees. but a timothy *meadow* is one of the worst things for any orchard. If the grass is closely pastured, and frequently top-dressed, the tress will probably do pretty well. As orchards become older, care is needed not to plow very deep after lying many years to grass, especially close to the trees, to avoid injuring the roots.]

Wild Crab for Stocks.—Will you please inform me through the columns of the next Cultivator, if the wild crab could be used profitably as stock for grafting the apple or pear on? F. Nichols. *Lewis Co., Ky.* [Apples have done well on the wild crab, but the trees are somewhat dwarfed in consequence. Pears succeed occasionally, but the trees do not often live many years.]

Coal Ashes as Manure.—Will you please to state the value of the ashes of the Stone or Anthracite coal for manure? Subscriber. [The value of coal ashes is small, as they are mostly of earthy materials. Some potash is found in them, mostly from the kindling wood. Kept dry, they are, however, very valublae as an absorbent in privy vaults, &c.]

Dwarf Trees.—To what age will the apple live when dwarfed on the paradise stock? Can pears be dwarfed on the paradise apple stock, and to what age will they live when dwarfed on the quince? j. b. d. [We do not know any very old dwarf apples, as they have not been cultivated many years in this country—we have no doubt they would live a long time. Pears cannot be easily dwarfed on them, and when succeeding for a time, easily break off. A few varieties of the pear, as Glout Morceau, Louise Bonne, Angouleme, and some others, if well pruned yearly and well cultivated, will live half a century or more.]

Wild Crabs for Apple Stocks.—As I am making preparation to raise a few crab stocks for apples, your remarks in reply to a correspondent in your issue of last week suggested one or two other inquiries: 1. To what size will the tree grow, compared with those on the free stock?—2. Is grafting or budding preferable?—3. How does the crab stock affect the tree in respect to the time of coming into bearing, the size of the fruit, &c.?—4. If there is no objection to these stocks, they may be desirable for those wishing a considerable number of varieties in a small orchard. Amateur. *Toledo.* [We have not a sufficient number of experiments, nor a knowledge of old trees raised on these stocks, to be able to answer satisfactorily. It is probable that the trees would be one-half or three-fourths as large as standard trees. Both grafting and budding will do, but budding is preferred, as making a better union. The trees would probably bear somewhat sooner, but no perceptible effect would be obtained on the fruit, or but little.]

Ditching in Muck.—Is there anything better for ditching than a good shovel in the hands of an Irishman? I mean for swamp ditching. I am aware of the ditching plow plow for use in clay and dry lands. e. d. h. *Milwaukee, Wis.* [We know of nothing better than a good spade or shovel in a good active pair of hands. The ditching plow is only intended to obviate the use of the pick in hard subsoils.]

Culture of Hemp.—I wish to make an inquiry through your paper, as to the growing of hemp and preparing it for market? I would like you, or any of your correspondents who possess the information, to give through the Co Gent., the manner of planting hemp, and the cultivation of it? Also, how to prepare it for market, and if in your opinion it would be a profitable crop to raise at the present time? Cotton being so very high, could not hemp supply its place in many articles? j. c. a. *Clarksville, Iowa.*

Rye for Soiling.—*Messrs. Editors*—In your issue of Oct. 23d, G. L. asks the question, "If I cut rye for fodder in the spring, will there be a crop of grain from it afterwards?" From five or six years experience in raising this crop for soiling, I should say *no.* He further inquires, "How many times in a season can rye be cut for feeding?" This would depend very much upon the condition of the soil, and the fect of the winter upon the crop. If the ground is rich, and the rye has not suffered from winter killing, it may be cut three times, though the last cutting will be a great deal lighter than either the first or second—the first cutting will be the best. I once left a small piece after having cut it once, to see what the result would be, which was that the rye headed out and blossomed, but the kernel failed to make its appearance. In some of the heads there was a blasted resemblance of kernels, but they were entirely valueless. I think G. L. will meet with disappointment, if he attempts to "kill two birds with one stone" in raising this crop—feeding it off *after the stalks are formed*, and then get a crop of grain. j. l. r. *Jefferson Co., N. Y., Nov. 1.*

Dairy House.—We hope some of our dairymen will favor us with replies to these inquiries:—I propose next spring to build a dairy, attached to a farm-house situated on level ground. I should like to know what would be the best size and arrangement for a dairy of 20 or 25 cows? what utensils and furniture would be required, &c.? Ontario Co.

Taking Wool from Pelts.—In answering T. E. A.'s inquiries I would say, wet the flesh side of the pelts thoroughly, and lay them, flesh sides together, for a few days until they become soft, when an application of good ashes or quick-lime, and the pelts laid together, as before, a few days, will start the wool; in this way more wool can be got than by shearing, and the pelt is then ready for the tanner. A. Moss.

Ringbone.—Will you be kind enough to inqure through the Co. Gent., what would cure the ringbone in a horse's foot, which seems to have been caused by a strain? It has been running on four months, and all remedies I have tried have proved useless. Probably some of your subscribers know what would cure it. A Subscriber. *Stephensport, Ky.*

Tanning Muskrat Skins.—I should like to have some of your readers publish in your next paper, how to tan Muskrat and Mink skins with the fur on them, so that they will be soft and pliable. h. s. c.

Hogs.—Being desirous of improving the stock of hogs that I have at present, I would like to hear from some of your stock raising friends a statement of the comparative value of the Chester and the Irish Grazier, as regards rapidity of growth, keeping, fattening, size, perfection of form, and breeding qualities; and where I can get either or both, *warranted thorough-bred*, most convenient to Louisville, Ky. J. C.

Grafting Cement.—I made grafting cement last spring, from a recipe in the Country Gentleman of April 24, page 271, and found it the best that I ever used, and think it worth a year's subscription for the paper. h. s. c.

[For the Country Gentleman and Cultivator.]

SURFACE APPLICATION OF MANURE.

The theory that "one load of manure on the surface is worth two loads plowed in," if admitted at all, must be admitted with very essential modifications. As a general rule, progressive farmers, tilling heavy tenacious land, with a clay subsoil, will demur from such a proposition. Practical experience shows that such soils need the manure buried in them, to warm, to lighten, and to destroy the tenacity, and thus fit them for the entrance of heat and air, two most important and essential elements of fertility, and without whose agency success in raising any crop cannot be expected.

On a light gravelly or sandy soil, the statement is applicable but in part, and with qualifications. Such soils are usually destitute of vegetable matter, which is needed to make them retentive of moisture and fertilizers. Vegetable matter must be furnished them, either by plowing in green crops, or a free application of manure well incorporated with the soil.

Land of medium quality, neither too heavy, wet and clayey, or otherwise too sandy and gravelly, is the most suitable to be top-dressed. But even in these soils it is a question whether top-dressing is the most economical. The effect of top-dressing is immediate, and makes an exhibit for about two years, but has hardly any effect on the soil, in either modifying or enriching it, and ignores entirely the use of the essential elements of progressive agriculture, viz., light, heat and air. The soil, to be permanently and economically improved, must be so tilled as to take the greatest possible advantage of these, which necessitates the use of the plow, spade, or their equivalents.

There is a very important advantage which mixing manure with the soil has over top-dressing; and it is a subject which has received too little attention, and has often been entirely overlooked by farmers, namely, "the fermentation of the manure in the soil;" or as a writer on English agriculture expresses it, "*making the whole field into a compost heap.*"

Dana, in his "Muck Manual," explains fully the philosophy of the process. Briefly stated it is this: Fermentation evolves alkaline gasses, which, uniting with the acids in the soil, produce, in sandy and gravelly soils, a chemical decomposition and disintegration of the silicates and insoluble portions of the soil, fitting them to become food for the roots and rootlets, and these again, as they grow, acting chemically as solvents of inert matter in clayey soils, causing disintegration and amelioration; and in a soil rich in vegetable matter, bringing it into active fertility. Thus a little manure incorporated with the soil, stimulates to action other elements of fertility than what exists in itself, which are both progressive and permanent. By plowing and cultivating, the soil is loosened and deepened, as well as modified, by bringing to the surface and exposing to the influence of light, heat and air, so that what was before inert, becomes an active agent in producing vegetation.

Top-dressing adds to the soil only at best a homeopathic dose. Twenty loads per acre, of thirty bushels per load, spread on land, add one load to eight square rods, or two and one-half quarts to each square yard. How many such top-dressings would add to the turf one-half or even one-fourth of an inch, any one curious at figures can determine. The fact that such an application results in an increase of grass, shows that success is due not so much to the quantity as to the action which it generates in the soil. Should this same amount be mixed with the soil by proper cultivation, still greater success might be predicated, for there is added all the advantages which light, heat, frost and air, also fermentation, modification of soil and a choice of grasses, the result of seeding, which top-dressing does not usually include.

Economy would decide that all the elements of fertility should be used if we would farm profitably. We must not use a part and neglect the rest. The nearer we can make the farm like the garden, the more sure the success, and the greater the profit. And this can be done only by a free use of manure well incorporated with the soil, and thorough after cultivation. S.

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[For the Country Gentleman and Cultivator.]

BUGGY PEAS---Bruchus granarius.

For some time I have been intending to write for the benefit of those who save seed peas. In this country they are invariably spoiled by the bugs—that is, a large portion. Some persons assert that it does not hurt them, and that they come just as well, which induced me to try the experiment of planting six peas in a pot—three perforated ones and three sound ones: the sound ones germinated and grew finely, but the others did not sprout, which proves the injury they receive.

For the last three years I have adopted the plan of sealing them up in bottles, air tight, as soon as they are dry enough, sprinkling a few drops of camphorated spirits among them. On a large scale they could be headed up in casks. In this way I have not lost a single pea. For the first time I noticed last season beans badly perforated with numerous holes, the worms having completely eaten out the interior of the bean. Having neglected to seal up my beans this year, I have lost nearly the whole of them. I enclose you a few, to let you see how they operate, having never heard of beans being effected in this way. It may be new to you.

Mt. Carmel, O. T. V. P.

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[For the Country Gentleman and Cultivator.]

SURFACE MANURING.

The common excuse for extremists or enthusiasts in politics, arts, sciences, religion, and in almost everything, is often made, that if some people were not ahead of the times, the world would hardly move at all. To enable a wagon to reach the crest of the hill, it is said to be necessary for the leader horses to go some distance beyond. It is, however, a grave question, whether *all* good progress in the right direction is not rather hindered, by, to use a common expression, "running a thing into the ground"—whether extreme views and carrying an argument, even on a sound view of a question, too far, does not entirely miss of its aim and intention.

I always read with great interest the communications of your very able correspondent, S. EDWARDS TODD, but a remark of his in the last number of the 'COUNTRY GENTLEMAN,' under the head of manuring meadows, rather occasioned surprise.

Assuming the theory and practice of surface fall manuring to be correct, is he *serious* in saying, "I have observed for many years past, that they who spread their manure on the surface in the spring of the year, promote the growth of their neighbor's grass about as much as they do their own?"

It is sometimes said, none but *old farmers* should read agricultural papers. Young ones are apt to be misled. This I have never thought, could apply to the 'COUNTRY GENTLEMAN,' which I have always considered at the top of the list, and the most *reliable* of all our agricultural papers. In it the wheat seems carefully winnowed from the chaff, so as to make it an almost indispensable vademecum to every progressive farmer, whether young or old.

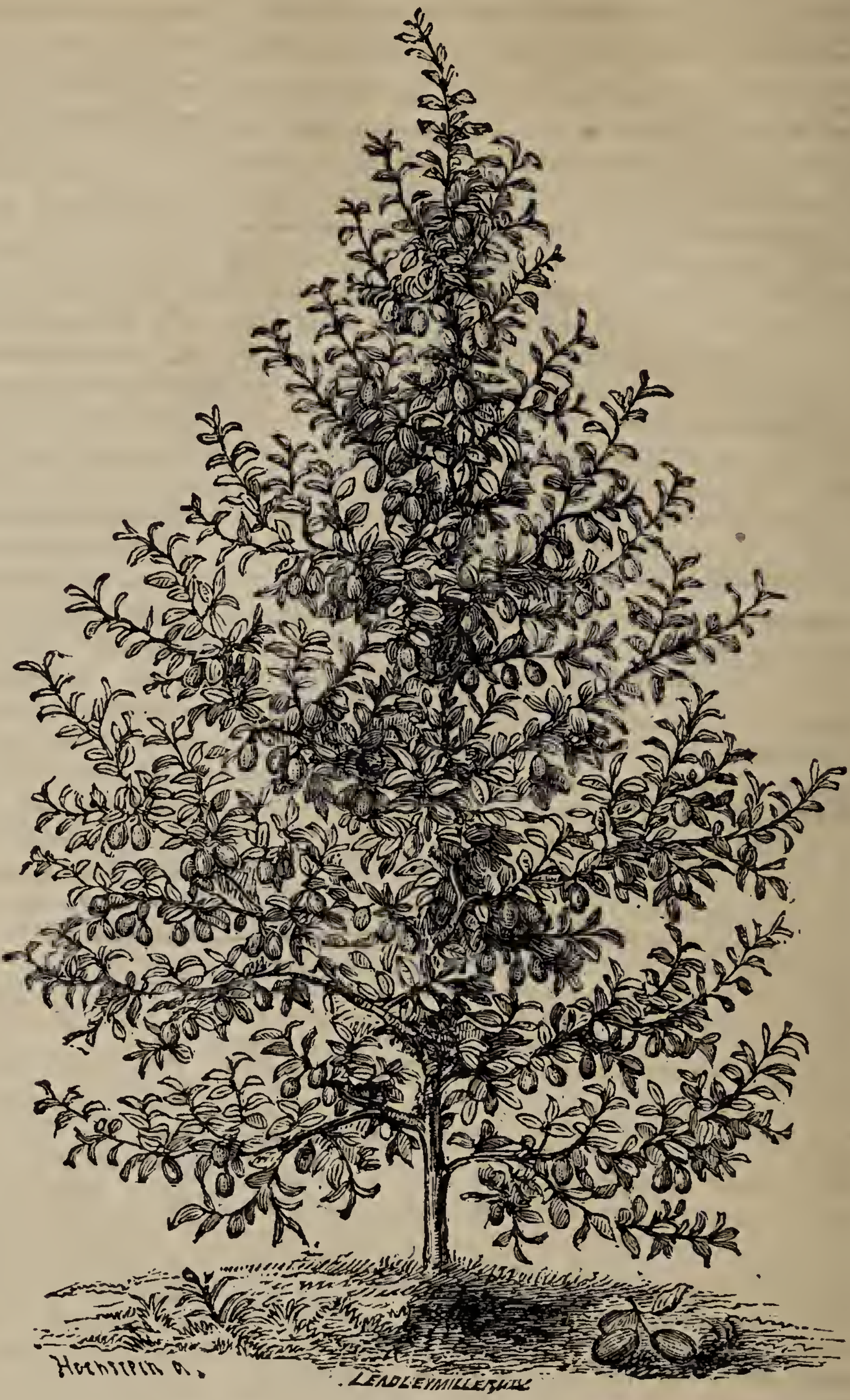
Probably all can agree with the spirit of S. E. Todd's article, of the great advantages of fall manuring, but with such an *extent* of atmosphere as we have in *this country*, is it possible that the waste of gases from spring manuring can increase the fertility of adjoining farms?

Philadelphia, Pa. PASCHALL MORRIS.

DWARF PLUM TREE.

The annexed cut is hardly a fair representation of a handsome pyramidal plum tree in full bearing. Such a tree, loaded with large beautiful specimens, of such showy sorts as Pond's Seedling, (English,) Bradshaw, and Sharp's Emperor, are well worthy of being looked upon! Ellwanger & Barry's grounds at Rochester have furnished the finest specimens of this sort to be found in the country.

Dwarf Plums are raised by budding on the wild or Canada plum. They will grow eight to ten feet high in well trained pyramids.



Dwarf Plum.

Wire for Garden Purposes.—The Agriculturist says, "lead is much used in England for tying up fruit trees and vines to stakes and trellises, also for attaching labels to stakes. It is soft, flexible, durable, and less hurtful to plants than copper wire. It is made of lead and an alloy mixed with it. For the coarser uses of gardening, especially where much strength is required, this is undoubtedly a good thing. Yet for common, every-day work, such as tying plants to stakes, etc., we much prefer the old bass matting. This is cheaper, more easily handled, and sufficiently durable."—*Maine Farmer.*

Now is the proper time to cover up anything you have any doubts about being hardy enough to stand the winter. A little protection of leaves or loose, littery manure, will hurt nothing, however hardy, while it will save plants quite green that would otherwise badly brown or completely die out.

[For the Country Gentleman and Cultivator.]

ON WINTERING BEES.

In patent hives turn over the draws so as to prevent the entrance of the bees, or their breath, in September or fore part of October. When cold weather commences, suspend the bottom board half an inch, and open the ventilator, so that the watery substance which is caused by the breath and other exhalations of the bees, and collects in the drawer in cold weather may be kept out of them; because frost forms in them, and runs down through the apertures on to the bees as often as it melts, and makes the bees damp, and the combs mould; besides this vapor penetrates and fills the timber, (drawers and chamber,) and causes a disagreeable smell the following season.

There are three principal causes of death among bees in the winter, to wit: want of honey, (not bread, for they never eat it, except when in the larvæ state;) want of air, and freezing. Bees sometimes die of starvation with plenty of of honey in the hive at the same time. In cold weather they crowd together in a small compass, in order to keep warm, and then their breath and vapor collects in frost in all parts of the hive, except in the region they occupy. Now unless the weather moderates so as to thaw the ice, the bees will be compelled to remain where they are located until their stores are all consumed that are within their reach. One winter we had cold weather for ninety-four days in succession, during which time the bees could not move from one part of the hive to another. I examined all my hives on the eighty-third day; and on the ninetieth day I found four swarms dead. I immediately examined for the cause, which was as already stated. I then carried all my hives into a warm room, and thawed them so that the bees could move.

Too much swarming frequently occasions the loss of the old stock in the winter following, because their companions are so reduced in numbers that the necessary animal heat cannot be kept up in the hive to prevent them from perishing by cold. All such stocks should be stored in a dry cellar, or some warm room where they can be kept comfortable during cold weather.

It is believed that bees may be kept through the winter without losing them, if the apiarian is attentive to their wants. If destitute of honey, he will feed them—if suffering for want of air, (which is the most frequent cause of death,) he will ventilate them—if freezing, he will thaw them out—in short, if they are apparently dead, he will resuscitate and bring them to life and activity, which may be done in all cases except when smothered, if attended to in season. In

February, 1857, I had a swarm that were starved by design. I resuscitated them three times without feeding, in three successive days, before life was extinct. The life of bees many times is in a state of suspension considerable time before their death, and may be resuscitated by human aid when otherwise life would become extinct. I have resuscitated them separately under various circumstances for myself and neighbors. Some of the best stock I now own were once apparently dead. A screen bottom board should be used, so as to let up the warm air into the hive, and at the same time enable the apiarian to control and keep the bees in the hive during the process of resuscitation. The feeder should be used in every case to give the bees exercise, and restore activity.

A cellar made in the side of a dry hill, so covered as to keep out water, is a good place for wintering bees. There should be two ventilators at the two most extreme parts of the cellar—one near the bottom and on its side to admit pure air—the other through the top or covering, to let the bad air escape.

Apiarians observing the above rules, will find themselves well paid for so doing.

Lansingville, N. Y. DANA FLETCHER.

AMERICAN CHEESE IN EUROPE.

The last Part of the Journal of the Royal Ag. Society of England, has a very interesting chapter "On the Composition of Cheese, and on Practical Mistakes in Cheese-making. By Dr. AUGUSTUS VOELCKER." We propose to transfer a considerable portion of this essay to our pages, believing it may be read with great profit by our more intelligent and inquiring cheese-makers. But for this week we only copy the Doctor's brief allusion to American Cheese:

Of late years a good deal of cheese has been imported into England from America, some of which is by no means bad; indeed, one or two specimens which came under my notice were excellent in quality. The majority, however, are inferior, and are sold at a low price, being generally badly made and deficient in flavor.

The following table gives the composition of American cheeses:

	No. 1.	No. 2.	No. 3.	No. 4.
Water,	27.29	33 04	31.01	38.24
Butter,	35.41	33.38	30.90	26,05
*Casein,	25.87	27.37	26.25	26.81
Milk-sugar, lactic acid, and extractive matters,	6.21	2.82	7.43	3.64
†Mineral matters (ash)	5.22	3.39	4.41	5.26
	100.00	100,00	100.00	100.00
*Containing nitrogen,	4.14	4.38	4.20	4.29
†Containing common salt,	1.97	.47	1.59	1.94

No. 1 was as nice a cheese as could be desired; in flavor it much resembled good Cheddar, and was found to contain even a higher proportion of butter and rather less water than good Cheddar.

The second cheese, though rich in butter, was retailed at 7*d.* per lb., and the third at 6*d.* per lb. Both were deficient in flavor and badly made.

The fourth chesse was the worst of the four, and had to be sold at 5*d.* per lb. It was full of holes, badly made, and had a very strong smell. It was evident that the whey was not carefully pressed out in the making.

The examination of these and other American cheeses leads me to the conclusion, judging from our imports, that good materials are even more thoroughly spoiled on the other side of the Atlantic than in England.

[For the Country Gentleman and Cultivator.]

Grape-Growing on the Borders of Lake Erie.

It is probably known to many that we have a soil and climate well adapted to the grape, along the south shore of Lake Erie. I will give briefly my experience for 1862. My vines were protected last winter with hemlock boughs, and a few covered with earth. The winter was mild, and it was not needed, but it may be this.

Isabella loaded with fruit, but mildew destroyed nearly all. Catawba, very little mildew—ripened well, a fair crop. Concord, first-rate every way; but one row, near my Isabellas, had some mildew; but the fruit will burst its skin some in ripening. Delaware all right; grows well, and one vine three years old gave 14 pounds of luscious fruit. Diana almost as good as to quality, but the vine is rather tender. Clinton, good. Rebecca, fine quality. Hartford Prolific, early and healthy. Perkins, To-Kalon, and a dozen more on trial, but Concord, Delaware, Diana, Hartford Prolific, and Catawba, most reliable thus far.

My soil is gravel and loam, and I think my grapes are benefitted in quality by the use of fresh water marl, which has a large per cent. of carbonate of lime. The cultivation of the vine is doubtless destined to take a prominent place in this region, and in various parts of our (now afflicted) country, and it is hoped all who can, will give us light, as we at the best have to feel our way.

Fredonia, N. Y. A. S. MOSS.

THE COUNTRY GENTLEMAN.

MESSRS. EDITORS—Inclosed I send $2 for another copy of the COUNTRY GENTLEMAN, for one of my neighbors, to whom I have occasionally loaned it, for perusal; he has found that he loses more by not having it regularly, than the amount of subscription, and desired me to order it for him. It is gratifying to observe the effect produced by introducing such a paper to those who were not accustomed to reading it. There seems to be new life and vigor infused throughout the whole department of Household Affairs, the Yard, the Garden and Field operations are so fully treated upon; the Grazier and Breeder's department giving every desirable information in reference to the proper management of Horses, Cattle, Sheep and Swine, Poultry, Bees and Rabbits; and in fact every living thing either in animal or vegetable kingdom, properly belonging to the farm, receives a full share of attention among the great amount of information collected from such extensive resources, and concentrated in the COUNTRY GENTLEMAN.

There are but few persons residing in the country, however well they may be acquainted with the practical operations of agriculture, that would not derive benefit from its influence. The small amount required to "fix up" one's home and give it a neat and genteel appearance, when reminded of and told how to do it, through the columns of a weekly journal, is so very trifling, compared with the great satisfaction of having a comfortable residence made cheerful in its appearance for the enjoyment of the family, and inviting to social visitors, that any one of taste must feel thankful for the suggestion.

We had a severe snow storm commencing yesterday morning and continuing all day, blowing hard from the north, and freezing some; the snow is now several inches deep, being the first this season. Farmers were not quite ready for cold weather, corn, apples and other crops to gather, fodder and fuel to be stored, and other preparations to make for winter; but this will be a sufficient warning, that when it moderates again there will be no time for delay. WILLIAM PARRY.

Cinnaminson, N. J., 11 mo., 8th, 1862.

[We publish but few of the letters we receive in commendation of the COUNTRY GENTLEMAN, but where they are accompanied by practical evidences of sincerity in the form of frequent efforts to extend its circulation, we do not feel at liberty to withhold the testimony they afford to the real value and usefulness of this Journal.]

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GRUB IN THE HEAD OF SHEEP.—Dr. Dadd, in a communication to the Prairie Farmer, says the only way to prevent grub in the head of sheep, is to put plenty of wholesome "grub" into the stomach of the animal—and that it is a well known fact, that sheep properly attended to, *well fed* and housed, are never troubled with the parasite known as the grub.

1863 THE ILLUSTRATED 1863 ANNUAL REGISTER OF RURAL AFFAIRS.

NO. IX---FOR 1863.

The publication of the NINTH NUMBER of THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS, for 1863, has been somewhat detained for the completion of a very full and valuable Treatise on Entomology, including those Insects about which there is now the greatest desire for general information, from the accomplished pen of the tate Entomologist, Dr. ASA FITCH. The importance of the article will be found a full recompense for the delay involved. The ANNUAL REGISTER can now be supplied—all standing orders having been already filled—in any desired quantity, at the following rates:

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2. Estimate for a Farm of One Hundred Acres.
3. Causes of Disaster.
4. Remedies and Requisites.

II. MANUFACTURE OF MAPLE SUGAR—SEVEN ENGRAVINGS.

1. Sap Boilers.
2. Evaporators.
3. Processes of Collecting and Boiling the Sap.

III. BEST WAY TO BUILD A HOUSE—FORTY-EIGHT ENGRAVINGS.

1. Introduction.
2. Carpenter's and Mason's Specifications.
3. Illustrated Glossary of Architectural Terms.

IV. THE DAIRY—SEVEN ENGRAVINGS.

1. Hints on Butter Making.
2. Rules for Making Cheese.
3. Rules for Management of Cows.

V. RURAL ECONOMY—SIX ENGRAVINGS.

1. Suggestions for Winter.
2. Screwing on Nuts—Leaky Roofs—Horse Fork—Painting.
3. To Avoid Running out of Hay.
4. Highways—Lightning Rods—Osier for Bands—Tape Line in the Cornfield.
5. Forest Leaves for Litter—Good Smoke House—Corn Marker—Scalding Tub—Harvesting Peas.
6. Chain Pumps—Irrigation—Draining—Clean Land.

VI. FRUITS AND FRUIT CULTURE—FOURTEEN ENGRAVINGS.

1. Autumn and Spring Transplanting.
2. Dwarf Apples.
3. Rules for Tree Planters.
4. Systematic Formation of Pyramids.
5. Two Native Plums.
6. Sending Buds by Mail.
7. Shortening in the Peach.
8. Construction of a Cheap Grapery.
9. Gooseberries.
10. Time for Pruning Orchards.
11. Fruit versus Malaria.
12. Dwarf Cherries.
13. Strawberries—Quick Returns.
14. Pruning the Quince.
15. Select Lists of Apples.
16. Labels for Fruit Trees.
17. Select List of Grapes.

VII. INSECTS BY DR. ASA FITCH—THIRTY-FOUR ENGRAVINGS.

1. Definitions of Terms, &c.
2. Descriptions of Orders.
3. Insects which Injure Fruit Trees.
4. Insects which Injure Grain Crops.
5. Insects Injurious to Gardens.

⁂ To show how full and valuable an article this is, it may be mentioned that Six Insects injurious to Fruit; Thirteen injurious to Grain, and Six injurious to Gardens, are described with complete and new Illustrations, engraved expressly for this article in the ANNUAL REGISTER. It forms, in point of fact, the readiest HAND BOOK OF ENTOMOLOGY for the practical use of the farmer and gardener, we have ever seen.

VIII. NOTES ON NEW AND DESIRABLE FLOWERS—TEN ENGRAVINGS.

1. Double Zinnia.
2. Japan Pinks.
3. Bidens Atrosanguinea.
4. Cuphea Limapani—The Striped French Marigold.
5. Dwarf Nasturtium—New Sweet Williams.
6. Dwarf Convolvulus—Oenothera Camarkiana—Splendid Gazania.
7. Lychnis Haageana—Whittavla Grandiflora.
8. Calleopsis Cardaminifolia—The Gaillardias.

⁂ This article was written for the ANNUAL REGISTER with Drawings and Engravings expressly prepared to accompany it, and not before published in this country, by JAMES VICK, Esq., of Rochester.

IX. ADVERTISEMENTS.

This, preceded by the usual Calendar pages and Astronomical Calculations, forms a book which is certainly cheap at its retail price and the Publishers, with a view of rendering its circulation still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers.

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ALBANY, N. Y.
Nou. 20, 1862.

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DAIRY OF FORTY OR FIFTY COWS,

at the election of the tenant for a long term of years, at a stipulated rent, situated in the Mohawk valley, on the line of the Central road, three miles east of Fonda. It has between fifty and sixty acres of interval and superior upland with a never failing supply of water, a durable strength running through the entire length of it, and is in a high state of productiveness. There has been a dairy upon it for the last 17 years. The farm-house is large and commodious, finished throughout, having an excellent cellar and cistern. There is also a large vegetable garden and fine, spacious door-yard sloping to the road. The dairy room is furnished with running water, good cheese press and O. NEIL'S approved Whey Vat for 50 cows. Hog pen for 40 hogs, and every convenience that can reasonably be desired. A yoke of cattle, or pair of draft horses, or both, with farming utensils, and among them a fine section cast-iron roller could be had with the farm if wished. None need apply unless every way competent and responsible, and possessing a good moral character. Address the subscriber ALFRED DE GRAFF, Fonda, N. Y.
Nov. 27—w&m3mos.

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THE EARLIEST AND
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ripening two weeks earlier than any other good Grape. Possessing a most delicious flavor—in fact, equal to the most delicate hot-house Grape. It originated at the base of the Adirondac range of mountains, on the shore of Lake Champlain. It is believed to possess all the requisites to establish its character as the

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They contain the biography of more than a thousand ministers, and a history of each denomination, with a statement of its doctrinal views, making a complete library of religious biography and history. The lives of these ministers are interspersed with memorable anecdotes and incidents, and illustrated by letters from distinguished statesmen and clergymen, rendering the volumes an inexhaustible source of instruction and entertainment.

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Nov. 6—w6tm1t.

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[From the Tribune, Aug. 2.]

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Oct. 9—w3t—m3t.

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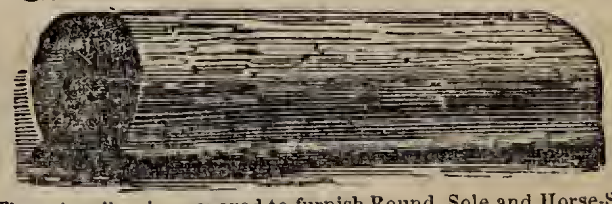

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farm, containing 265 acres, situated nine miles from Albany, four miles from Troy, one and a half miles from Cohoes, and one-half mile from New-York Central Railroad. It has on it

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